

SEQUENCE LISTING

<110> Biosyn Arzneimittel GmbH

<120> Nucleic acid molecule comprising a nucleic acid sequence
which codes for a haemocyanin, and comprising at least one
intron sequence

<130> PCT1220-01966

<140> PCT/EP00/08129

<141> 2000-08-21

<160> 239

<170> PatentIn Ver. 2.1

<210> 1

<211> 1269

<212> DNA

<213> *Haliotis tuberculata*

<400> 1

```

ggctgtgttca gttttactac gtgcgccttg tggcgggggc tggagcagac aacgtcgtca 60
gaaaggagcgt gactcacctc acggatgacg aggtgcaagc tctccacggc gccctccatg 120
acgtcaactgc atctacaggg cctctgagtt tcgaagacat aacatcttac catgccgcac 180
cagcgtcgtg tgactacaag ggacggaaga tcgctcgtct gtccacgggt atgcccgagt 240
tcccctctct gcacagggca tatgtcgtcc aagccgagcg ggcactgttg tccaaacgga 300
agactgtcgg aatgccttac tgggactgga cgcaaacgct gactcactta ccatctcttg 360
tgactgaacc catctacatt gacagtaaa gttggaaagg tcaaaccaac tactgtgtac 420
gcggcgagat agcgttcac c aataagaaga ctgcgcgagc tgtagatgat cgcctattcg 480
agaagtggtga gcctgggtcac tacacacatc ttatggagac tgtcctcgac gctctcgaac 540
aggacgaatt ctgtaaattt gaaatccagt tcagattggc tcataatgct atccattact 600
tggttgccgt taaattttaa tattcaatgt caaacttgga atacacctcc tacgacccca 660
tcttcttctc ccaccactcc aacgttgacc gcctcttcgc catctggcag cgtcttcagg 720
aactgcgagtg aaagaatccc aatgcaatgg actgtgcaca tgaactcgct caccagcaac 780
tcccaaccttt caacagggac agcaatccag tccagctcac aaaggaccac gtcacacctg 840
ctgacctctt tgattacaaa caacttggat acagctacga cagcttaaac ctgaatggaa 900
tgacgccaga acagctgaaa acagaactag acgaacgcca ctccaaagaa cgtgcgtttg 960
caagctctccg actcagtggtc ttggggggtt ctgccaaagt tgtgtctat gcattgtgtc 1020
ctgatgatga tccacgcagt gatgactact gcgagaaagc aggcgacttc ttcattcttg 1080
ggggtcaaaag cgaaatgccg tggagattct ctctcatgat gtaactgaag 1140
cggtagatca ccttgagtc ccgctaagtg gccactacta tgtgaaaaca gaactctca 1200
gcgtgaatgg cacagcactt tcacctgac ttcttctca accaactgtt gcctaccagg 1260
ctggaaag 1269

```

<210> 2

<211> 1257

<212> DNA

<213> *Haliotis tuberculata*

<400> 2

```

gtcaccttga cccacctgtg catcatcgcc acgatgacga tcttattgtt cgaaaaaata 60
tagatcatctt gactcgtgaa gaggaatagc agctaaggat ggctctggag agattccagg 120
ccgacacatc cgttgatggg taccaggcta cagtagagta ccattggcctt cctgctggtt 180
gtccacgacc agatgcaaaa gtacaggttcg cctgtgtgat gcattggcat gcatccttcc 240
ctcactggca ccgctgttcc gttaccagg tggaaagatgc tcttgtaagg cgtggatcgc 300
ctatcgggtg tcttatttgg gactggacaa aacctatgac tcaccttcca gacttggcat 360
caaatgagac gtacgtagac ccgtatggac atacacatca taatccatc ttcaatgcaa 420
atatatcttt tgaggaggga caccatcaca cgagaccgat gatagattcg aactcgttg 480
cccagtcgc ttttggggag cattcccatc tgtttgatgg aatcctgtac gcatttgagc 540

```

aggaagattt ctgcgacttt gagattcagt ttgagttagt ccataattct attcatgcgt 600
 ggataggggg ttccgaagat tactccatgg ccaccctgca ttacacagcc tttagcccca 660
 tttttcactt tcatctattcc aatgtcgatc gtctatgggc aatctggcaa gctcttcaaa 720
 tcaggagaca caagccatat caagccact gtgcacatgc tgtggaacag ttgccaatga 780
 agccatttgc tttcccatca cctcttaaca acaacgagaa gacacatagt cattcagtc 840
 cgactgacat ttatgactac gaggaagtgc tgcactacag ctacgatgat ctaacgttg 900
 ggggatgaa ttgaagaag atagaagaag ctatacatc cagacaacag catgaacgag 960
 tcttcggggg atttctcctt gtggaatag gaacatctgc acttgttgac attttcataa 1020
 ataaacgggg gaaccaacca ctcaagactg gagatattgc catcttgggt ggtgccaagg 1080
 aatatgcctt ggggtttgac cgcttgata aggtgaaat aactgactca ttgaagacac 1140
 ttctctcga ttctgctgga gattatgaag tcaactttaa atctcatgat atgcacgaa 1200
 acgctcttga tacggacctg attccacacg cagcagttgt ttctgagcca gctcacc 1257

<210> 3

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 3

ctacctttga ggtatgaaa gacagcttac gaatcagaaa aatgtgcac agcttgactc 60
 ctgaagaaac aaatgaactg cgtaaagccc tggagcttct tgaanaatgat catactgcag 120
 gtggattcaa tcagctttggc gccttccatg gagagctcaa atggtgccc atactcgaa 180
 cggagacaaa ggttgcatgc tgtgttcacg gcatggcgtg tttccctcat tggcacaggc 240
 tttctgtctc ccaggcgagg aatgctctta gaaagcatgg gtacagtggg gctctacca 300
 actgggattg gactcggccc ctttcccaac ttctgcatc ggttagtcat gacgagtata 360
 cagatccctc cgaccatcac gtgaagcata acccggtggt caatggccac atcgatacag 420
 taaateagga taccaccaga agcgtacggg aggatcttta tcaacaacct gaatttggag 480
 atttcacgga tattgtctca caagctcctc tagcattaga acaagatgac ttctgttctg 540
 ttgaagtgcg gtatgagatt tcccataatt ctatccatga acttgtatgc ggaacgcagc 600
 ctatagggat ggcacgctg agatatacag catagcatcc aatcttttct ttgcatcatt 660
 caaacacgca caggatctgg gctatttggc aatccctgca aaaatcacga ggcaaacgct 720
 acaacactgc caactgcgcc atagaatcta tgaagaaggc cctgcaacca ttgggactaa 780
 cgagtgcctc taacctgtac agaatacaca gagagcatgc tatcccgttt gatgtcttca 840
 actatagaga taaccttoat tacgtatatg ataccctgga atttaattgt ttgtcgattt 900
 cacaacttga tagagagctg gaaaaaatca agagtacga aagagtattt gctggattct 960
 tgtgtcgggg gattaaaaaa tctgtctctt tgaatttcga agtttgtact ccacctgata 1020
 attgtcataa agcagggggg ttttatctac tggggagca aaacgagatg gcttgggctt 1080
 atgaccgact ttccaagtat gatattactc aggttctgga agcaaacact ctacacttct 1140
 atgatcattc tttcatcgc tacgaagctt ttgatcttaa agagatgagt ttgggaagct 1200
 acctgttcca cactgcaaat gtggtacatg attccggcac ag 1242

<210> 4

<211> 1239

<212> DNA

<213> *Haliotis tuberculata*

<400> 4

gcaccctgta tcgtgataac tacgttgaag aagttactgg ggccagtcac atcaggaaga 60
 atttgaacga cctcaataacc ggagaaatgg aaagccttag agctgcttcc ctgcataattc 120
 aggaacaggg aacatatgaa tctattggcc agtaccatgg caaacaggcg aatgtctcaat 180
 tgaatgatca taatattgag ttgttgtgcc atggtatgcc taccttcccc cagtggcaca 240
 gactgtatgt ggttcaaggtg gagaatgtcc tcttaaacag gggatctggt gtgctgttc 300
 ctactctgga gtgagctgct cccatagacc atctactcca ttctcattgat gatgcaacat 360
 acttcaatcc cgcacaacag cggtagcagc cttaaccctt ctccagggga aaggttactt 420
 ttgaaaacgc agtcacaaca agggagccac aagccgggct cttaactcca gattatattg 480
 atgagaatgt ttactctgca ctggagcagg aaaattattg tgactttgaa attcagttct 540
 agcttgttca taacgcactt cattccatgc tgggaggtga agggcagtag tccagtctct 600
 cccctgacta tttcgtcttt gatcccgctc tcttctaca tcatgccaac acggacagac 660
 tgtgggcaat ctggcaggaa ctacaagat tccgagagct gccttatgaa gaacgcaact 720
 gtgcaatcaa cctcatgcat caaccactga agccgttccg tgatccacat gagaatcacg 780
 acaatgtcac ttggaatatc tcaaaaacc aggcaggatt cgactaccag aaccacttcg 840

gatacaagta	tgacaacctt	gagttccatc	acttatctat	cccaagtctt	gatgctaccc	900
tgaaagcaag	gagaatactc	gacagagtg	ttgcgggctt	ccttctctat	aacatagga	960
cttctgctga	cataactatc	tacatatgtc	tgccctgacg	acggcgctgc	aatgactgca	1020
gtcatagggc	gggaacattc	tatatctctg	gagggcgaac	agagatgcct	tttatctttg	1080
accgtttgta	taaatttgaa	atcaccaaac	cactgcgaaca	gttaggagtc	aagctgcatg	1140
gtggagtttt	cgaactggag	cttgagatca	aggcatcaaa	cggttccctat	ctggatcccc	1200
atacctttga	tcacaactatc	atctttgaac	ctggaacag			1239

<210> 5

<211> 1260

<212> DNA

<213> *Haliotis tuberculata*

<400> 5

atacccatat	cttggaccac	gacctatgag	aagagatact	tgtcaggaag	aatataattg	60
atttgacgcc	aagggagag	gtttctctag	tcaaagcttt	gcaaaagaatg	aagaatgatac	120
gtctcgctga	tgggtaccac	gccattgcct	ctttccatgc	cctgccacca	ctctgtccca	180
atccatctgc	agctcacccg	tatgcttgct	gtgtccatgc	catggctaca	tttccccag	240
ggcacagact	gtacactgtt	caggttcagg	atgccctgag	gagacatggt	tcaactgttg	300
gtattccctta	ctgggactgc	acaaaaccag	tcaacagagt	accgcagctt	ctttcttcag	360
caacatttta	tcataccaatc	cggaaatatta	atatttcaaa	tccattcttc	ggggcgtaga	420
tgaattttga	aggacggggc	gttcatacac	agaggccatc	aaatactgag	cgccgtgttc	480
acagtgggga	tcatacgagga	taccacaact	gggtctctga	aactctgttc	tttgctttgg	540
aacaggaaga	ttactgcgat	tttgaataac	aatttgagat	agccctatac	ggcatccaca	600
catggatctg	tgggaagcga	gtatatggca	tgggacacct	tcactatgca	tcataatgatc	660
caattttctta	catccaccat	tcacagacgg	acagaatatg	ggctatttgg	caagagctgc	720
agaagtacag	gggtctatct	gggtcgggaag	caaatctgtc	cattgaacat	atgagaacac	780
ccttgaagcc	tttcagcttt	gggccaccct	acaatttgaa	tagtcatcag	caagaatatt	840
caaagcctga	ggacacgctt	gactataaga	agtttgagata	cagatatgat	agtcctggaat	900
tggagggggc	atacaattct	cgcattgatg	aacttatcca	gcagagacag	gagaaagaca	960
gaacttttgc	aggggtcttc	cttaaaaggt	ttggtacatc	cgcactctgt	tcatttgcaag	1020
tttgagagat	tgatacacac	tgtaaaagatg	cgggctattt	cactattctg	ggagggatcag	1080
ccgaaatgcc	atgggccttc	gacaggcttt	ataagatgta	ctattctaaa	acctctccag	1140
acatgaacct	gaggcagcag	gacactttct	ctatagacgt	aactatcacg	tcttacaagt	1200
gaacagtact	ctcgggagac	ctcattcaga	cgcctccat	tatttttga	ctgggagcgc	1260

<210> 6

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 6

ataaactcaa	ctcacggaaa	catacaccta	acagagctcg	ccatgagcta	agtagcetta	60
gttcccgctga	catagcaagc	ttgaaggcag	ctttgacaag	ccttcaacat	gataatggga	120
ctgatggctga	tcaagctatt	gctgccttcc	atggcgcttc	tgccgagctg	cacgagccat	180
ctggagcttga	gatcgctctt	tgcatccacg	gcattgcgac	gtttctccac	tggcaccggt	240
tgtaacctct	gcagttggag	caagcgctgc	gcagacacgg	gtccagatgt	gctgttccat	300
actgggactg	gaccaagcca	atcacccaac	tgccacacat	ctgcacagac	ggagaatatt	360
atgacgtttg	gcaaaaatgcc	gtcttgccca	atccgtttgc	aagaggttat	gtgaaaatta	420
aagatgcatt	tacggttgaga	aatgtccagg	aaagtctggt	caaaatgtca	agttttggaa	480
agcactcgct	tctgtttgac	caggctttgt	tggtctctga	acaaactgac	tactgtgact	540
tcgaagtctga	gttttgagtg	atgcataaca	cgatccatta	tctcgttaga	ggggcgtcaa	600
cgtaacccct	ctctctcttc	gagattctct	catcacgatc	aatctctctt	attccacctc	660
cgtttgttga	caaaatatgg	gctgtatggc	aagaactgca	aagcaggaga	catctacagt	720
ttagaacagc	tgattgtgct	gtgggcctca	tggtgcaggc	aatgaggcct	ttcaacaagg	780
atttcaacca	caactctgtc	accaagaagc	acgcagctcc	taatacagta	tttgattatg	840
aagatcttgg	ctataactat	gacaaccttg	aaatcagttg	tttaacttca	aatgagatgc	900
aggcgttta	atgcaaaacgc	aagtccatgc	ctagagctct	tgctgggttc	ctgttgtttg	960
gattaggaac	ttcgctgat	atacatctgg	aaatttgcaa	gacatcgaaa	aactgcatg	1020
atgctggtgt	gattttctac	cttggaggtt	ctgcagagat	gcattgggca	tacaaccgcc	1080
tctacaagta	tgacattaca	gaagcattgc	aggaatttga	catcaacctc	gaagatgttt	1140

tccatgctga tgaaccattt ttcttgaggc tgctggtgtg tgctgtgaat ggaactgtca 1200
ttccatgctc tcattcttcc cagccaaacga taattctatga accaggcgaa g 1251

<210> 7

<211> 1209

<212> DNA

<213> *Haliotis tuberculata*

<400> 7

atcaccatga cgaccatcag tcgggaagca tagcaggatc cggggctccg aaggacgtga 60
acacctttag taaggctgag accgacaacc tgagggaggc gctgtgggtg gtcattggcg 120
acagggtccc caatggcttt caagctattg gctctttcca tgaaaaacca gctttgtgtc 180
ccatgctctga tggccacaac tactcatgtt gctctacagg tatgggtacc tttccacact 240
ggcatgcgct ctacaccaag cagatggagg atgcaatgag ggcgcatggg tctcatgtcg 300
gcctgcaccta ctgggactgg actgctgcct tcaccacact gccaacactg gtcaccgaca 360
cggacaacaa ccccttccaa catggacaca ttgattatct caatgtcagc acaactcgat 420
ctcccagaga ctgctgttcc aacgaccccg agcatggatc agagtgtgtc ttctacagac 480
aagtcctctt agctctggaa caaactgatt tctgcaaat cgaagtctag tttagagataa 540
ccacaatgag catccattcc tggacagggt gccacagccc ctacgggaatg tccactctcg 600
acttctactgc ctacgatcct ctcttctggc ttcaccacto caaccacgca agaactgtgg 660
ctgtctggca agctttgcaa gaatacacag gacttccata caaccatgcc aattgtgaga 720
tccaggcaat gaaaacgccc ctgaggcctt tcagtgaaga tatcaaccac aaccacgtca 780
caaaagctaa cgggaagcca ttagatgtgt tcgagtataa tcgggttgagc ttcagtagac 840
acaacctcat ctccatgga tacagtatcc cggaaactga tcgcgtgctt gaagaagaag 900
aggaggagga cagaatattt gctgccttcc ttctcagtg aatcaagcgt agtgcgtgat 960
tagtgttctga catatgccag ccagaaacag ctcaggagact ttgtcgattt 1020
tgggaggggga gctagaatat cccctggtcct tcgacagact gttccgctat gatataacca 1080
agggtatgaa cgagctcacac ctgaggcatg actctgaact taccttcagg gtgaagattg 1140
tccgcaccga cgaccacagc ctctctttag acagtgtcaa agcaccaact attgaatttg 1200
aacggggcg 1209

<210> 8

<211> 1535

<212> DNA

<213> *Haliotis tuberculata*

<400> 8

tgcacagagg cggaaaccac gaagatgaac accatgatga cagactcgca gatgtcctga 60
tcaggaaaga agttgacttc ctctccctgc aagaggccaa cgcaattaa gatgcactgt 120
acaagctcca gaatgacgac agtaaaaggg gcttttagacc catagctggc tatcaccgggt 180
attcataat gtgtccagaa agaggtaacc acagtatcc ctgctgtgtc caccgaagatg 240
ccgtgttccc cccactggac cgctgcata ccattcagat ggagagagct ctgaaaaacc 300
atggctctccc attgggcatt ccttactggg attggacaaa gaagatgtgc agtcttccat 360
ctttctttgg agattccagc aacaacaacc ctcttcaaaa atattacac cggggcgctgc 420
agcagaaac aaccagggac attaatcaga gactctttaa tcaaaccaag ttgtgtgaat 480
ttgatctact atattactca actctgcaag tcttgaggga aaactcgtac tgtgactttg 540
aagtctcagta tgagatccct cataacgccc tccactcctg gcttgaggga actggaagat 600
attccatgtc taccctggag cattcgccct ttgacctgt ctcatgatt caccactcga 660
gtttgtagat aatctggatc ctctggcaga agttgcaaaa gataagaatg aagccttact 720
acgcatgtga ttgtgtgtgc gacagactta tgaagacccc cctgcacccc tcaactacg 780
aaacccgtta tgaagatgaa ttaccccgca tcaactcttt cccaagcata ctgtttgacc 840
actacaggtt caactatgaa tacgataaca tgagaatcac gggtcaggac atacatgaac 900
ttgaagaggt aattcaggaa ttaagaaaca aagatcgcag atttgcgtgt ttgttttgtg 960
cgggctctac gatattcagc acagtgaag tattcattca ttcgaaaaac gatcaagatc 1020
acgaagaata tgcaggagaa ttgtcagttt tgggaggtga gaaggagatt cgggtgggcat 1080
atgaaagata gctgaaatg gacatctccg atgctgtaca caagctctac gtgaaagattg 1140
aagacatccg ttttagagtg gttgttactg ctctacaagg tgacgtgtgt accaccaggc 1200
tgtctcagc attcatctgc caccgtccag cccatctggc tcacgacatc ttggtaatcc 1260
cagtaggtgc gggccatgac ctcccgcta aagtcgtagt aaagagccgc accaaagtgc 1320
agtttacacc aatagattcg tcggtaacaa aagcaatggt ggaagctggg agctatactg 1380
ctatggtcaa atgcactgt ccccttttct cttaccacgg ctttgaactg gacaaagtct 1440

acacgcgtcga tcacggagac tactacattg ctgcaggtag ccacgcgttg tgtgagcaga 1500
acctcaggct ccacatccac gtggaacacg agtag 1535

<210> 9

<211> 1003

<212> DNA

<213> *Haliotis tuberculata*

<400> 9

cacagactgt tegtacacca ggtggaagat gctctgatca ggcgaggatc gcctataggg 60
gtccccctact gggactggac teagcctatg gcgcctctcc caggactctgc agacaacgcc 120
acctatagag atcccactag cggggacagc agacacaacc ccttccacga tgttgaagt 180
gccttttga aaatggacgtac agaacgtcac ccagatagta gattgtttga acaaccttta 240
tttggcaaac atacgcgtct ctctgacagt atagtctatg cttttgagca ggaggacttc 300
tgcgattttg aagttcaatt tgagatgacc cataaataa ttcacgcctg gattggtggc 360
ggcgagaagt attccatgct ttctctacac tacacagcct tcgacctat cttctacctt 420
cgctactcca acactgaccg gctctgggca atttggcaag cgttgcatat acgaagaaac 480
aggccttaca aggtctattg tgcttggtct gaggaaacgc agcctctcaa acctttcgcc 540
ttcagttccc cactgaacaa caacgaaaaa acctacgaaa acctggtgcc caaccaagtt 600
tacgactacg aaggagtctt tggctatact tatgatgacc tcaactctgg ggcatggac 660
ctgggtctagc ttggaagaata catccagagg cagagacaga gagacaggac ctttgcgtgt 720
ttctttctgt cacatattgg tacatcagcg aatggttgaat tcattataga ccatgggac 780
cttctacact ccgtggggcac gtttgcgtgt cttggcggag agaaggagat gaaatgggga 840
tttgaccggt ttgacaataa tgagattaca gatgaactga ggcaacttaa tctcgtgtct 900
gatgatgttt tcagcatctc tgttaaagta actgatgttg atgcagtaga gctgtctctt 960
gaactcatgc catctgctgc tatcatcttc gaacgaagcc ata 1003

<210> 10

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 10

ttgaccatca ggaccgcgat catgacacaa tcattaggaa aaatgttgat aatcttacac 60
ccgaggaat taattctctg aggcgggcaa tggcagacct tcaatcacag aaaaccgccg 120
gtggattcca gcaaaattgct gcttttcacg gggaaaccaa atggtgccca agtcccgatg 180
ctgagaagaa gttctcctgc tgtgtccatg gaatggctgt ctccctcac tggcacagac 240
tcctgaacgt gcaaggcgag aatgccctga gaaagcatgg atgtctcgga gctctccct 300
actgggactg gactcgggcc ctgtctcacc taccatgatt ggttttggta agtagacaga 360
ctacaccgat gccatattcc accgtggaag cccgaaaccc ctggtacacg ggccatattg 420
atacagttgg tgttgacaca acaagaagcg tccgtcaaga actgtatgaa gctctggatg 480
ttgggccatta tactgggggtc gctaaagcaag tgcttctggc tttggagag gatgacttct 540
gtgattttga agtccagttt gagatagctc acaatttcat tcaactctct gtcgggggaa 600
gcgagccata tggatggcgt tcaactccgtt acactactta tgatccaatt ttctacctcc 660
atcattctaa cactgacaga ctctgggcta tatggcaggc tctacaaaag tacaggggca 720
aaccttaca ttccgccaac tgcgccattg ctctctatgag aaaaccccta caaccctttg 780
gtctgactga tgagatcaac ccggatgatg agacaagaca gcattgctgt cctttcagtg 840
tcttgattta caagaacaa ttcaattatg aatatgacac ccttgacttc aacgcactat 900
caactctcca gctggaccgt gaactgtcac ggagaaagtc tcatgacaga gtatttgcg 960
gatttttgcg gcatggtatt cagcagctctg cactagttaa attctttgtc tgcaaaatcg 1020
atgatgactg tgaccactat gctggtgaat tctacacctt tggatgatga gctgaaatgc 1080
catcggggct tgatcgtctt tacaaatatg agtacctga gcagctcaat gccctggatc 1140
tacacatcgg agatagattc ttcatcagat acgaagcgtt tgactctcat ggtacaagtc 1200
ttggaagcaa catcttcccc aaacctctct tcatatagta cgaaggggca g 1251

<210> 11
 <211> 1244
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 11
 gtcaccatca ggctgacgag tacgacgaag ttgtaactgc tgcaagccac atcagaaaga 60
 atttcaaaaga tctgtcaaaag ggagaagtag agagccctaa gtctgccttc ctgcaacttc 120
 agaagcagcg agtctatag aatattgcc agttccacgg caagcctcgg ttgtgtgatg 180
 ataacggtcg caaggttgcc tgttgtgtcc atggaatgcc caccctcccc cagtggcaca 240
 ggctctatgt cctccaggtg gagaatgctt tgctggagag aggatctgcc gtctctgtgc 300
 catactggga ctggactgaa acatttacag agctgccatc ttgtattgct agggctacct 360
 atttcaattc cctgcaacaa acgtttgacc ctaatcctt cttcagaggt aaaatcagtt 420
 ttgagaatgc tgttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaacgt catgttggtt ttgaaacagg acaactactg cgacttcgag atacagtttg 540
 agatggttca caatgttctc catgcttgcc ttgttggaag agctacttat tctatttctt 600
 ctcttgatta ttctgcattc gaccctgtgt ttttccctca ccatgcgaac acagatagat 660
 tgtgggcatc ctggcaggag ctgcagaggt acaggaagaa gccatacaat gaagcggatt 720
 gtgcacttaa ctaatgctgc aaacctctac atcccttcga caacagtgat ctcaatcatg 780
 atctctgaac ctttaaatat tcaaaaccca ctgatggctt tgactaccag aacaactttg 840
 gatacaagta tgacaacctt gagttcaatc atttcagtat tcccaggtt gaagaaatca 900
 ttctgtattag acaacgtcaa gatcgtgtgt ttgcaggatt cctccttcaac aacattggga 960
 catccgcaac tgttgagata tctcgtctgt tccctaccac cagcgggtgag caaaactgtg 1020
 aaaaacaaag cggaaacttt gccgtactcg gaggagaacac agagatggcg tttaactttg 1080
 acagactcta caggtttgac atcagtgaaa cactgagggg cctcggcata cagctggaca 1140
 gccatgactt tgacctgcag atcaagattc ttgatcctac cttgatccac 1200
 acatcctgcc agagccatcc ttgatttttt tgcttggttc aagt 1244

<210> 12
 <211> 1255
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 12
 tctttcctgc gtccctgatg gcattcagat gacatccttg tgagaaaga agtgaacagc 60
 ctgacaacca gggagactgc atctctgac catgctctga aaagtatga ggaagacat 120
 tcacctgacg ggttccaagc cattgcctct tccatgctc tgccaccact ctgcccttca 180
 ccatctgcag ctacacgcta tgcctgtgtg gtccacggca tggctacatt tccccagtg 240
 cacagattgt acactgtaca gttccaggat gcactgagga gacatggagc taccgttagt 300
 gtaccgtatt gggattggct gcgaccgcag tctcacctac cagagcttgt caccatggag 360
 acatacactg atatttggag taacagagat ttccccaatc ctttctacca agccaatatt 420
 gagtttgaag gagaaaaatc tacaacagag agagaagtca ttgcagacaa actttttgtc 480
 aaagtggtgac acgtttttga taaactgggt ctccaaacaa gccatcctg cgtcgagcag 540
 gaaaactact gtgactttga gattcagttt gaaattcttc acaacggcgt tcacacgtgg 600
 gtcgaggagca gtctgactca ctctatcgga catcttcatt acgcatttca cgacctctt 660
 ttctaccttc accatttcca gacagaccgt atttgggcaa tctggcaaga atcccgaaa 720
 cagagagggc tctcgggtga tgaggctcac tgtgctctcg agcaaatgag agaaccattg 780
 aagcctttca gcttcggcgc tccttataac tggaaatcag tcacacagga ttcttccgca 840
 cccgaggaca ccttcgacta cagggaagttt ggttatgaat atgacaattt agaattcctg 900
 ggaatgtcag ttctgtcaact ggaatcaatc attattgaac atcaagaaaa tgatagagta 960
 ttcgctgggt tctctgttgg tggattcggg ggttcgccat cagttaattt ccaggtttgt 1020
 agagctgatt ccatcatgtca ggaatgctgg tacttcacgc ttcttgggtg cagtgtctgag 1080
 atggcggtgg cttttgacag gctttacaaa tatgacatta ctgaaactct ggagaaaaatg 1140
 cactctcgat atgatgatga cttcacaaac tctgtcagtc tgaccgccaa caacggaaat 1200
 gtccctgagca gcagtctaat cccaacacgc agtgctcatc tccagcgggg acatc 1255

<210> 13
 <211> 1248
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 13
 gtgacataaa taccaggagc atgtcaccga accgtgttcg ccgtgagctg agcgatctgt 60
 ctgcgaggga cctgtctagt ctcaagctcg ctctgcgaga cctacaggag gatgatggcc 120
 ccaacggata ccaggtctct gcagccttcc atgggtctacc agcaggctcg catgatagcc 180
 ggggaatctg gatcgatgtg tgcattcacg ggatgccgac ctctcccagc tggcacagac 240
 tgtacacctt gcagttggag atggctctga ggagacatgg atcatctgtc gccatccccct 300
 actgggactg gacaaagcct atctccgaac tcccctctct ctccaccagc cctgagttatt 360
 atgaccctat gcgatgatgt gtggtaaaca acccattctc caaaggtttt gtcaaatgtt 420
 caaataccta cacagtaaga gaccacagg agatgtctgt ccagctttgt gaacatggag 480
 agtcaatcct ctatgagcaa actcttcttg ctcttgagca aaccgactac tgtgattttg 540
 aggtacagtt tgaggctctc cataacgtga tccactacct tgttggtgga cgtcagacct 600
 acgcatgtgc ttctctgcat tatgctctct acgacccatt ctcttttata caccattcct 660
 ttgtggataa gatgtgggta gtatggcaag ctcttcaaaa gagggaggaaa cttccataca 720
 agcgagctga ctgtgctgtc aacctaatga ctaaaccaat gaggcatttt gactccgata 780
 tgaatcagaa cccattcaca aagatgcacg cagttcccaa cacactctat gactacgaga 840
 cactgtacta cagctacatg aatctcgaaa taggtggcag gaatctcgac cagcttcagg 900
 ctgaaattga cagaagcaga agccacgac gcgttttttg tggattcttg cttctgtggaa 960
 tcggaacttc ttctgatgtc aggttttgga ttgttagaaa tgaaaaatga tgcacagggg 1020
 gtggaataat tttctcttta ggtggagcca aggaaatgcc atggctattt gcagaaaact 1080
 tcaagtttga tatcaccatc gtactcgaga atgctggcat tagcccgagag gacgtgtttg 1140
 atgctgagga gccattttat atcaagggtg agatccatgc tgttaacaag accatgatac 1200
 cgtcgtctgt gatcccgacc ccaactatca tctattctcc tggggagag 1248

<210> 14
 <211> 1207
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 14
 gtgcgcctgc tgacagtgc cactctgcc aactgtctgg ctctgggggt aggaaggagc 60
 tcacgacctt cactgtgtct gagacggaga acctaaagaca ggctcttcaa ggtgtcatcg 120
 atgatactgg tcccaatgtg taccaagcaa tagcatcctt ccacgggaagt cctccaatgt 180
 gcgagatgaa cggcgcaag gttgctctgt gtgctcacgg tatggcctcc ttcccacact 240
 ggccagacta gtatgtgaag cagatggaag atgcctctgg tgaccacggg tcacatatcg 300
 gcatccctta ctgggactgg acaactgcct tcacagagtt acccgccctt cgtcacagat 360
 ccgagaacaa tcccttccat gagggctcgca ttgatcatct cgggttaacc acgtcacggt 420
 cccccagaga catgctgttt aacgacccag agcaaggatc agagtctgtt ttctatagac 480
 aagtcctcct ggctttggag cagactgact actgccagtt cgaagtccag tttagctgga 540
 cccacaacgc catttactcc tggacagggt gacgtagccc ttacggaatg tcgaccctcg 600
 agttcacagc ctacgatctc ctctctgggc ttaccactc caacacogac agaattctggg 660
 ctgtctggca agcaactgcag aaataccgag gactcccata caacgaagca cactgtgaaa 720
 tccaggttct gaacagccc ttgaggccat tcaacgatga catcaaccac aatccaatca 780
 ccaagactaa tgcaggcct atcgattcat ttgattatga gaggtttaac tatcagtatg 840
 accaccttag ctccatgtg aagacatccc ctgaactgaa tgacctgtct gagggaaagaa 900
 aaagagaaga gagaacattt gctgccttcc ttcttcgtgg aatcggttgc agtgcgtgatg 960
 tcgtcttga catctgccg ccaatgggt actgtgtctt tgcaggaaac ttgtctgtgc 1020
 tgggaggggg gctagaaatg ccttggtctc tcgacagat gtctccgtat gacatacaca 1080
 gagtcatgaa tccagttcat ctcagtatg atctcagatt cagtttcagg gtgaagcttg 1140
 ttgccacaaa tggcactgag ctttcatcag accttctcaa gtcaccaaca attgaacatg 1200
 aacttgg 1207

<210> 15
 <211> 1546
 <212> DNA
 <213> *Haliotis tuberculata*

 <220>
 <221> misc_feature
 <222> (1273)..(1273)
 <223> "n" is a, g, c, or t, including c or t

 <400> 15
 agcccacaga ggaccagtgt aagaaacaga agtcaactgc caacatactg acgggcaatgc 60
 acactttcat cgtaagggaag ttgatttcgct gtccctggat gaagcaaaaca acttgaagaa 120
 tgccctttac aagctacaga acgaccacag tctaaccggga taacgaagcaa tctctgggta 180
 ccatgggatac cccaatctgt gtccgggaaga agggcgatgac aaaaatccctc tgctgcgtcc 240
 ccggatggggc atcttttctt actggcacag actcttgacc attcaactgg aaagagctct 300
 tgagcacaaat ggtgcaactgc ttggtgttcc ttactgggac tggaacaagg actgtctgct 360
 actgcggcggt ttcttctccg actccagcaa caacaatccc tacttcaagt accatactgc 420
 cgggtgttggc cagcacaccg tcagagagcc aactagtctt atataaacc agccccaaat 480
 ccatggttat gattatctct attacctagc attgaccacg cttgaagaaa acaattactg 540
 ggaactttgag gttcagtatg agatcttcca caacgccgtc cactctggcg ttggaggatc 600
 ccagaagtat tccatgtcta ccttggagta ttggccctt gacctgtctt ttatgatcct 660
 gcccctgggt ctagacagac ttgggatcat ctggcaagaa cttcagaaga tcaggagaaa 720
 tccctacaac ttgcgtaaat gtgcttatca tatgatggaa gaggccactgg cgccctctag 780
 ctatccatct atcaaccagg acgagttcac ccgtgcacaa tccaagcctt ctacagtttt 840
 tgacagccat aagttcgctg accattacga taacctgaat tttagagctg acagcatcca 900
 agaactcaac acaactcatca atgacttgag aaacacagac agaactctag caggatttgt 960
 ttgtgcaggc actcgtagct ctgctagtgt caagatctat ctccgaacag atgacaatga 1020
 cgaagaagtt ggaactttca ctgtcctggg aggagagagg gaaatgccat gggcctacga 1080
 cgagtttttc aagtatgaca tcacagaggt tgcagataga cttaaataa agttatgggg 1140
 acacccttta acttccggaa ctggagatca catccttacg aatggaaatg ctggttaaaa 1200
 agagcttacc caaatctctt catcatctac agacctgcc aatcatgact cgaagtcttt 1260
 gttatccag tanggaagaa acccttccat cccctcccaa gttgtctga agaaaggcac 1320
 ccgcctcag ttccaccagc tcatgatct accgttcaca taccacgat tcgaactgaa 1380
 ctacactgca ctcttcaact gtgtggtacc accgttcaca taccacgat tcgaactgaa 1440
 ccacgtctat tctgtcaagc ctggtgacta ctatgttact ggaccacaga gagacctttg 1500
 ccagaatgca gatgtcagga ttcatatcca tgttgaggat gaggtaa 1546

 <210> 16
 <211> 967
 <212> DNA
 <213> *Megathura crenulata*

 <400> 16
 ggctcaccgt actgggactg gactgaaccc atgacacaca ttccgggtct ggcaggaaac 60
 aaaacttatg ttgatttcca tgggtcatcc cacacaatcc cttttcactg ttcagtgatt 120
 gcatttgaag aaaaagtccc ccacacccaaa agacaaatag atcaagactc ctttaaaccc 180
 ctaccttttg gacaccacac agacctgttc aaccagattt tgtatgcctt tgaacaagaa 240
 gattactctg actttgaagt ccaatttgag attaccata acacgattca cgcttgga 300
 ggaggaaagg aacatttctc aatgtcgtcc ctacattaca cagctttcga tctttgttt 360
 tactttcacc attcctaact tgatcgtctt tgggcccgtt ggcaagcctt acagatgaga 420
 cggcataaac cctacagggc ccaactgcgc atatctctg aacatatga cttgaaacca 480
 ttccgtcttt taactctccc taacaataac gaaaagactc atgccaatgc catgccaacc 540
 aagatctctg actatgaaa ttgtctccat tacacatac aagatttaac atttggaggc 600
 atctctctgg aaacacataga aaagatgac cagcaaaaac agcaagaaga caaggaatg 660
 gccggttttc tcttggctgg catacgtact tcagcaaatg ttgatattct cattaaaact 720
 accgatccg tgcaacataa ggctggaaca ttgtcagtc tccgttgaag caaggaatg 780
 aagtggggat ttgatccgct ttccaagttt gacatcacgc acgttttga agactctgat 840
 ctacactgct atggcgattt cgaagtact gtgacatca ctgaaagtcga tggaactaaa 900
 cttgcatcca gtcttattcc acatgtctt gtcattcgtg agcatgcacg ttgtaagctg 960
 aatagag 967

<210> 17
 <211> 1242
 <212> DNA
 <213> Megathura crenulata

<400> 17
 ttaaatttga caaagtgcga aggagtcgtc ttattcgaaa aaatgtagac gcttttagacc 60
 cgagaggagat gaatgaactt cgtaaagccc tagccttact gaaagaggac aaaagtgcgc 120
 tggattttca gcagcttggt gcattccatg gggagccaaa atggtgttcc agtcccgaa 180
 catctaaaaa atttgctgtc tgtgttcacg gcatgtctgt gttccctcac tggcatcgac 240
 tgttgacggt tcagagtga aatgctttga gacgacatgg ctacgatgga gctttgcgct 300
 actgggaggt gacctctcct cttaatcacc ttcccgaact ggcagatcat gagaagtacg 360
 tcgaccctga agatggggta gagaagcata acccttggtt cgatgggtcat atagatcacg 420
 tcgacaaaac aacaacaaga agtgttcaga ataaactctt cgaacagcct gagtttggtc 480
 attatacaag cattgccaac caagtactgc tagcgtttgga acaggacaaat ttctgtgact 540
 ttgaaatcca atatgagatt gcccataact acatccatgc acttgttagga ggcgctcagc 600
 ctctatggtat ggcacgtgct cgctacactg ctttttagtc actattctac ttgcatcact 660
 ctaatacaga tctgtatatgg gcaatatggc aggcctttaca gaagtacaga ggaaaaccgt 720
 caaacgttgc taactgtgct gttacatcga tgagagaacc tttgcaacca ttgggacctt 780
 ctgccaatat caacacagac catgtaacca aggagcattc agtgccattc aacgtttttg 840
 attacaagac caatttcaat tatgaatatg acactttgga atttcaaccgt ctctcaactc 900
 ctcatgtgaa taataagctc gaagcgataa agagccaaga caggttctctt gcaggcttcc 960
 ttttatctga tctcaagaaa tcactctctt ttaaatccaa tatttgcacc gatagcgaca 1020
 actgtcaccc cgctggagag ttttaccttc tgggtgatga aaacgagatg ccatggggcat 1080
 cagatagagt ctccaatat gacataacgc aaaaaactcca cgatctaaag ctgcacgacg 1140
 aagaccactt ctacattgac tatgaagtat ttgaccttaa accagcaagc ctgggaaaaa 1200
 atttgttcaa gcagccttca gtcattcatg aaccagaagt ag 1242

<210> 18
 <211> 1236
 <212> DNA
 <213> Megathura crenulata

<400> 18
 gtcaccatga aggcgaagta tatcaagctg aagtaacttc tgccaaccgt attcgaaaaa 60
 acattgaaaa tctgagcctt ggtgaactcg aaagtctgag agctgccttc ctggaaaattg 120
 aaaacgatgg aacttacgaa tcaatagcta aattccatg tagcctctgtt ttgtgccagt 180
 taaatggtaa ccccatctct tgtgtgtccc atggcatgcc aactttccct cactggcgaa 240
 gactgtacgt ggttgtcgtt gagaatgccc tcttgaaaaa aggatcatct gtactgttcc 300
 cttattcgga ctggacaaaa cgaatcgaa atttacctca cctgatttca gacgccactt 360
 actacaattc caggcaacat cactatgaga caaaccattt ccatcatggc aaaaacacac 420
 acgagaatga aatcactact agggatccca aggaagcctt ctccattca gactactttt 480
 acgagcaggt cctttacgcc ttggagcagg ataacactct gattttcgag attcagttgg 540
 agatattaca caatgatgtg cattctttac ttggtggcaa aggtaaatat tcatgtgcaa 600
 accttgatta cgctgctttt gatcctgtgt tcttccctca tcacgcaacg actgacagaa 660
 tctgggcaat ctggcaagac ctccagaggt tccgaaaaac gccatacga gaagcgaaat 720
 gcgctatcca attgatgcac acgccactcc agccgtttga taagagcgac aacaatgacg 780
 aggcacgaaa aacgatgcc actccacatg atggttttga atatcaaaac agcttttggt 840
 atgtctgga taactctgaa ctgaatcact actcgattcc tcagcttgat cacatgctgc 900
 aagaaagaaa aaggcatgac agagattatc ctggcttctt ccttcacaat attggaacat 960
 ctgccgatgg ccattgtatt gtatgtctcc caactgggga acacacgaag gactgcagtc 1020
 atgaggtctg attgtctccc atcttaggcg gtcaaacgga gatgtctctt gatttgaca 1080
 gactttacaa acttgacata actaaagcct tgaanaagaa cgtgtgtgac ctgcaaggcg 1140
 atttcgatct ggaaattgag attacggctg tgaattggat tcactctagac agtcatgctg 1200
 tccactctcc cactatactg tttgagggcg gaacag 1236

<210> 19
 <211> 241
 <212> DNA
 <213> Megathura crenulata

<400> 19
 attcttgccca cacagatgat ggacacactg aaccagtgat gattcgcaaa gatatacacac 60
 aattggacaa gcgtcaacaa ctgtcactgg tgaagccct cgagtcacat aaagccgacc 120
 attcaatctga tgggttccag gcaatcgctt ccttccatgc tcttctctct ctttgtccat 180
 caccagctgc ttcaaagagg ttgtcgctgt gctccatgg catgccaaac ttccgcgaat 240
 g 241

<210> 20
 <211> 949
 <212> DNA
 <213> Megathura crenulata

<400> 20
 ggcttgccct actgggattg gaccatgccca atgagtcatt tgccagaact ggctacaagt 60
 gagacctacc tcgatccagt tactggggaa actaaaaaca accctttcca tcacgcccaa 120
 gtggcgtttg aaaatgggtg aacaagcagg aatcctgatg ccaacttttt tatgaaacca 180
 acttaccggag accacactta cctcttcgac agcatgatct acgcatttga gcaggaagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacatgc atgggttggga 300
 ggcagtgaaa agtatccaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tctgtctctg gccatttggc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctgcgcctcg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt ccccatgaa caacaacgag aaaaactgac acaactctgt ccccactaac 540
 gtttatgact atgtgggagt ttgtcactat cgatgatgat accttcagtt tggcggtgat 600
 accatgtcag aacttgagga atataatcac aagcagacac aacatgatag aaccttttga 660
 ggattcttcc ttctcatatat tggaaacatca gcaagcgtag atattctcat caatcgagaa 720
 ggtcatgata aatacaaaagt gggaaagttt gtgagtactg gtggatccaa agaaatgaaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttccag cattactgtt gagatcaccg atgttgatgg atctccccc 900
 tctgcagatc tcatcccaac tcttgcata atctttgaac gtgggtcatg 949

<210> 21
 <211> 760
 <212> DNA
 <213> Megathura crenulata

<400> 21
 ctgatgccaa agactttggc catagcagaa aaatcaggaa agccgttgat tctctgacag 60
 tcgaagaaca aactctgttg aggcgagcta tggcagatct acaggacacg aaaacatcag 120
 ggggtttcca gcagattgca gcatccacag gagaaccaaa atgggtgtcca agccccgaag 180
 cggagaaaaa atttgatgc tgtgttcatg gaatggctgt tttccctcac tggccagat 240
 tggtagcagt tcaaggagaa aatgctctga ggaacatgg ctttactggt ggactgccc 300
 actgggactg gactcgatca atgagcgccc ttccacattt tgttctgat cctacttaca 360
 atgatgcta ttccagccag gaagaagata acccatggca tcatggtcac atagactctg 420
 ttggcctaga tactacaaga gatgtgctg atgatcttta tcaactctct ggtttcggtc 480
 actacacaga tattgcacaa caagtccttc tggcctttga gcaggacagt ttctgtgatt 540
 ttgagttaca atttgaatt gcccataatt tcataatgc actgattggt ggtaaacgaac 600
 catacagatg cgtactcttg aggtatacta catacagatc aatctctctc ttgcaccact 660
 ccagtacaga cgcactttgg gccatctggc aagcaatcac tagtgggccc gctcgcaggt 720
 cgaccataag ggagagctcc caacgcgttg gatgcaatct 760

<210> 22
 <211> 323
 <212> DNA
 <213> Megathura crenulata

<400> 22
 gttcacacca ggcgtgatgaa tctcgtgagg cagtaacaag cgctagccac ataagaaaaa 60
 atatccggga cctctcagag ggagaaattg agagcatcag atctgctttc ctccaaattc 120
 aaaaaggggg tatatatgaa aacattgcaa agttccatgg aaaaccagga cttttgtgaac 180
 atgatggaca tctcgttgct tgttggtgcc atggcatgcc cactcttccc cactggcaca 240
 gactgtacgt tcttcagggt gagaatgcgc tcttagaagc aggggtctga gttgctgttc 300
 cttactggga ctggacccta cct 323

<210> 23
 <211> 988
 <212> DNA
 <213> Megathura crenulata

<400> 23
 atggctgtgt ttccgcactg gcacagactg tttgtgaaac agatggagga cgcacttgct 60
 gctcatggag ctcatattgg cataccatcc tgggattgga caagtgctgt tagtcatctg 120
 cccgccttag tgaactgacca cgagaacaat cctctccacc acggccatag tggatcatctg 180
 aatgtgggata catctcgatc tccaagagac atgctgttta atgatcctga acaaggctca 240
 gaatcattct tctacagaca ggttctcttg actctagaac agacagactc ctgccaatct 300
 gaagttcagt ttgaacttac acacaatgcc atccactctt ggactggagg acataactcca 360
 tatggaaatg catcactgga atatacagca tatgatccac tcttttatct ccaccattcc 420
 aacactgatc gtatctgggc catctggcag gcaactccga aatatagagg tcttccatcc 480
 aacgcagctc actgcgatat ccaagttctg aaacaacctc ttaaacctat cagcgagttc 540
 aggaatccaa acccagtcac cagagccaat tctagggccg ttgattcatc tgattatgag 600
 aaattcaatt atcaatatga cacacttacc ttccaggcac tttctatccc agaacttgat 660
 gccatgcttc aagagagaaa gaaggaaagag agaacatttg cagccttccc gttgcacgga 720
 ttgggcgcca gtgctgatgt ttcgtttgat gtctgcacac ctgatggcca ttgtgccttt 780
 gctggaacct tcgcggtact tgggtggggag cttgagatgc cctggtcctt tgaagattg 840
 ttccgttacg atatcacaaa ggttctcaag cagatgaatc ttcactatga ttctgagttc 900
 cactttgagt tgaagattgt tggcacagat ggaacagaac tgccatcggg tctgtatcaag 960
 agccttacca ttgaacacca tggaggag 988

<210> 24
 <211> 310
 <212> DNA
 <213> Megathura crenulata

<400> 24
 gtcacgatca cagtgaacgt caccgatggat ttttcaggaa ggaagtcggt tccctgtccc 60
 tggatgaagc caatgacctt aaaaatgcac tgtacaagct gcagaatgat cagggtccca 120
 atggatatga atcaatagcc ggttaccatg gctatccatt cctctgccct gaacatgggt 180
 aagaccagta cgcgtgctgt gtcccaggaa tgctctgtatt tccacatggg cacagacttc 240
 atacaatcca gtttgagaga gctctcaaa aacatgggtt tcaatttgggt ctgccatatt 300
 gggactggag 310

<210> 25
 <211> 422
 <212> PRT
 <213> Haliotis tuberculata

<220>
 <221> SIGNAL
 <222> (1)..(15)

<400> 25

Leu Val Gln Phe Leu Leu Val Ala Leu Val Ala Gly Ala Gly Ala Asp
 1 5 10 15
 Asn Val Val Arg Lys Asp Val Ser His Leu Thr Asp Asp Glu Val Gln
 20 25 30
 Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro Leu
 35 40 45
 Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys Asp
 50 55 60
 Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser Phe
 65 70 75 80
 Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu Leu
 85 90 95
 Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln Thr
 100 105 110
 Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp Ser
 115 120 125
 Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile Ala
 130 135 140
 Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe Glu
 145 150 155 160
 Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu Asp
 165 170 175
 Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu Leu
 180 185 190
 Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr Ser
 195 200 205
 Met Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu His
 210 215 220
 His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln Glu
 225 230 235 240
 Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu Ala
 245 250 255
 His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln Leu
 260 265 270
 Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln Leu
 275 280 285
 Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu Gln
 290 295 300
 Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe Ala
 305 310 315 320

Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val Tyr
325 330 335

Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu Lys
340 345 350

Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp Arg
355 360 365

Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His Leu
370 375 380

Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe Ser
385 390 395 400

Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr Val
405 410 415

Ala Tyr Arg Pro Gly Lys
420

<210> 26

<211> 419

<212> PRT

<213> Haliotis tuberculata

<400> 26

Gly His Leu Asp Pro Pro Val His His Arg His Asp Asp Asp Leu Ile
1 5 10 15

Val Arg Lys Asn Ile Asp His Leu Thr Arg Glu Glu Glu Tyr Glu Leu
20 25 30

Arg Met Ala Leu Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
35 40 45

Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Arg Pro
50 55 60

Asp Ala Lys Val Arg Phe Ala Cys Cys Met His Gly Met Ala Ser Phe
65 70 75 80

Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Val
85 90 95

Arg Arg Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Lys Pro
100 105 110

Met Thr His Leu Pro Asp Leu Ala Ser Asn Glu Thr Tyr Val Asp Pro
115 120 125

Tyr Gly His Thr His His Asn Pro Phe Phe Asn Ala Asn Ile Ser Phe
130 135 140

Glu Glu Gly His His His Thr Ser Arg Met Ile Asp Ser Lys Leu Phe
145 150 155 160

Ala Pro Val Ala Phe Gly Glu His Ser His Leu Phe Asp Gly Ile Leu
165 170 175

Tyr Ala Phe Glu Gln Glu Asp Phe Cys Asp Phe Glu Ile Gln Phe Glu
 180 185 190
 Leu Val His Asn Ser Ile His Ala Trp Ile Gly Gly Ser Glu Asp Tyr
 195 200 205
 Ser Met Ala Thr Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu
 210 215 220
 His His Ser Asn Val Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln
 225 230 235 240
 Ile Arg Arg His Lys Pro Tyr Gln Ala His Cys Ala Gln Ser Val Glu
 245 250 255
 Gln Leu Pro Met Lys Pro Phe Ala Phe Pro Ser Pro Leu Asn Asn Asn
 260 265 270
 Glu Lys Thr His Ser His Ser Val Pro Thr Asp Ile Tyr Asp Tyr Glu
 275 280 285
 Glu Val Leu His Tyr Ser Tyr Asp Asp Leu Thr Phe Gly Gly Met Asn
 290 295 300
 Leu Glu Glu Ile Glu Glu Ala Ile His Leu Arg Gln Gln His Glu Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Ala Gly Ile Gly Thr Ser Ala Leu Val
 325 330 335
 Asp Ile Phe Ile Asn Lys Pro Gly Asn Gln Pro Leu Lys Ala Gly Asp
 340 345 350
 Ile Ala Ile Leu Gly Gly Ala Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365
 Leu Tyr Lys Val Glu Ile Thr Asp Ser Leu Lys Thr Leu Ser Leu Asp
 370 375 380
 Val Asp Gly Asp Tyr Glu Val Thr Phe Lys Ile His Asp Met His Gly
 385 390 395 400
 Asn Ala Leu Asp Thr Asp Leu Ile Pro His Ala Ala Val Val Ser Glu
 405 410 415
 Pro Ala His

<210> 27
 <211> 414
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 27
 Pro Thr Phe Glu Asp Glu Lys His Ser Leu Arg Ile Arg Lys Asn Val
 1 5 10 15
 Asp Ser Leu Thr Pro Glu Glu Thr Asn Glu Leu Arg Lys Ala Leu Glu
 20 25 30

Leu Leu Glu Asn Asp His Thr Ala Gly Gly Phe Asn Gln Leu Gly Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Asn Pro Glu Ala Glu His Lys
 50 55 60
 Val Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Ala Leu Gln Ala Glu Asn Ala Leu Arg Lys His Gly Tyr Ser
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser Gln Leu Pro
 100 105 110
 Asp Leu Val Ser His Glu Gln Tyr Thr Asp Pro Ser Asp His His Val
 115 120 125
 Lys His Asn Pro Trp Phe Asn Gly His Ile Asp Thr Val Asn Gln Asp
 130 135 140
 Thr Thr Arg Ser Val Arg Glu Asp Leu Tyr Gln Gln Pro Glu Phe Gly
 145 150 155 160
 His Phe Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175
 Asp Phe Cys Ser Phe Glu Val Gln Tyr Glu Ile Ser His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Thr Asp Ala Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Ala Tyr Asp Pro Ile Phe Phe Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Glu Ser Met Arg Arg Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ser Ala Ile Asn Pro Asp Arg Ile Thr Arg Glu
 260 265 270
 His Ala Ile Pro Phe Asp Val Phe Asn Tyr Arg Asp Asn Leu His Tyr
 275 280 285
 Val Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Glu Lys Ile Lys Ser His Glu Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Ile Lys Lys Ser Ala Leu Val Lys Phe Glu Val Cys
 325 330 335
 Thr Pro Pro Asp Asn Cys His Lys Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350

Asp Glu Asn Glu Met Ala Trp Ala Tyr Asp Arg Leu Phe Lys Tyr Asp
355 360 365

Ile Thr Gln Val Leu Glu Ala Asn His Leu His Phe Tyr Asp His Leu
370 375 380

Phe Ile Arg Tyr Glu Val Phe Asp Leu Lys Gly Val Ser Leu Gly Thr
385 390 395 400

Asp Leu Phe His Thr Ala Asn Val Val His Asp Ser Gly Thr
405 410

<210> 28

<211> 413

<212> PRT

<213> Haliotis tuberculata

<400> 28

Gly Thr Arg Asp Arg Asp Asn Tyr Val Glu Glu Val Thr Gly Ala Ser
1 5 10 15

His Ile Arg Lys Asn Leu Asn Asp Leu Asn Thr Gly Glu Met Glu Ser
20 25 30

Leu Arg Ala Ala Phe Leu His Ile Gln Asp Asp Gly Thr Tyr Glu Ser
35 40 45

Ile Ala Gln Tyr His Gly Lys Pro Gly Lys Cys Gln Leu Asn Asp His
50 55 60

Asn Ile Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
65 70 75 80

Arg Leu Tyr Val Val Gln Val Glu Asn Ala Leu Leu Asn Arg Gly Ser
85 90 95

Gly Val Ala Val Pro Tyr Trp Glu Trp Thr Ala Pro Ile Asp His Leu
100 105 110

Pro His Phe Ile Asp Asp Ala Thr Tyr Phe Asn Ser Arg Gln Gln Arg
115 120 125

Tyr Asp Pro Asn Pro Phe Phe Arg Gly Lys Val Thr Phe Glu Asn Ala
130 135 140

Val Thr Thr Arg Asp Pro Gln Ala Gly Leu Phe Asn Ser Asp Tyr Met
145 150 155 160

Tyr Glu Asn Val Leu Leu Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe
165 170 175

Glu Ile Gln Phe Glu Leu Val His Asn Ala Leu His Ser Met Leu Gly
180 185 190

Gly Lys Gly Gln Tyr Ser Met Ser Ser Leu Asp Tyr Ser Ala Phe Asp
195 200 205

Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
210 215 220

Trp Gln Glu Leu Gln Arg Phe Arg Glu Leu Pro Tyr Glu Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Asn Leu Met His Gln Pro Leu Lys Pro Phe Ser Asp Pro
 245 250 255
 His Glu Asn His Asp Asn Val Thr Leu Lys Tyr Ser Lys Pro Gln Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn His Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe His His Leu Ser Ile Pro Ser Leu Asp Ala Thr Leu Lys Gln Arg
 290 295 300
 Arg Asn His Asp Arg Val Phe Ala Gly Phe Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Asp Ile Thr Ile Tyr Ile Cys Leu Pro Asp Gly Arg Arg
 325 330 335
 Gly Asn Asp Cys Ser His Glu Ala Gly Thr Phe Tyr Ile Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Pro Phe Ile Phe Asp Arg Leu Tyr Lys Phe Glu Ile
 355 360 365
 Thr Lys Pro Leu Gln Gln Leu Gly Val Lys Leu His Gly Gly Val Phe
 370 375 380
 Glu Leu Glu Leu Glu Ile Lys Ala Tyr Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400
 His Thr Phe Asp Pro Thr Ile Ile Phe Glu Pro Gly Thr
 405 410

<210> 29

<211> 420

<212> PRT

<213> *Haliotis tuberculata*

<400> 29

Asp Thr His Ile Leu Asp His Asp His Glu Glu Glu Ile Leu Val Arg
 1 5 10 15

Lys Asn Ile Ile Asp Leu Ser Pro Arg Glu Arg Val Ser Leu Val Lys
 20 25 30

Ala Leu Gln Arg Met Lys Asn Asp Arg Ser Ala Asp Gly Tyr Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Asn Pro Ser Ala
 50 55 60

Ala His Arg Tyr Ala Cys Val His Gly Met Ala Thr Phe Pro Gln
 65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Val Gln Asp Ala Leu Arg Arg His
 85 90 95

Gly Ser Leu Val Gly Ile Pro Tyr Trp Asp Trp Thr Lys Pro Val Asn
 100 105 110
 Glu Leu Pro Glu Leu Leu Ser Ser Ala Thr Phe Tyr His Pro Ile Arg
 115 120 125
 Asn Ile Asn Ile Ser Asn Pro Phe Leu Gly Ala Asp Ile Glu Phe Glu
 130 135 140
 Gly Pro Gly Val His Thr Glu Arg His Ile Asn Thr Glu Arg Leu Phe
 145 150 155 160
 His Ser Gly Asp His Asp Gly Tyr His Asn Trp Phe Phe Glu Thr Val
 165 170 175
 Leu Phe Ala Leu Glu Gln Glu Asp Tyr Cys Asp Phe Glu Ile Gln Phe
 180 185 190
 Glu Ile Ala His Asn Gly Ile His Thr Trp Ile Gly Gly Ser Ala Val
 195 200 205
 Tyr Gly Met Gly His Leu His Tyr Ala Ser Tyr Asp Pro Ile Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu
 225 230 235 240
 Gln Lys Tyr Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Ile Glu
 245 250 255
 His Met Arg Thr Pro Leu Lys Pro Phe Ser Phe Gly Pro Pro Tyr Asn
 260 265 270
 Leu Asn Ser His Thr Gln Glu Tyr Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285
 Tyr Lys Lys Phe Gly Tyr Arg Tyr Asp Ser Leu Glu Leu Glu Gly Arg
 290 295 300
 Ser Ile Ser Arg Ile Asp Glu Leu Ile Gln Gln Arg Gln Glu Lys Asp
 305 310 315 320
 Arg Thr Phe Ala Gly Phe Leu Leu Lys Gly Phe Gly Thr Ser Ala Ser
 325 330 335
 Val Ser Leu Gln Val Cys Arg Val Asp His Thr Cys Lys Asp Ala Gly
 340 345 350
 Tyr Phe Thr Ile Leu Gly Gly Ser Ala Glu Met Pro Trp Ala Phe Asp
 355 360 365
 Arg Leu Tyr Lys Tyr Asp Ile Thr Lys Thr Leu His Asp Met Asn Leu
 370 375 380
 Arg His Glu Asp Thr Phe Ser Ile Asp Val Thr Ile Thr Ser Tyr Asn
 385 390 395 400
 Gly Thr Val Leu Ser Gly Asp Leu Ile Gln Thr Pro Ser Ile Ile Phe
 405 410 415

Val Pro Gly Arg
420

<210> 30
<211> 417
<212> PRT
<213> Haliotis tuberculata

<400> 30
His Lys Leu Asn Ser Arg Lys His Thr Pro Asn Arg Val Arg His Glu
1 5 10 15
Leu Ser Ser Leu Ser Ser Arg Asp Ile Ala Ser Leu Lys Ala Ala Leu
20 25 30
Thr Ser Leu Gln His Asp Asn Gly Thr Asp Gly Tyr Gln Ala Ile Ala
35 40 45
Ala Phe His Gly Val Pro Ala Gln Cys His Glu Pro Ser Gly Arg Glu
50 55 60
Ile Ala Cys Cys Ile His Gly Met Ala Thr Phe Pro His Trp His Arg
65 70 75 80
Leu Tyr Thr Leu Gln Leu Glu Gln Ala Leu Arg Arg His Gly Ser Ser
85 90 95
Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile Thr Glu Leu Pro
100 105 110
His Ile Leu Thr Asp Gly Glu Tyr Tyr Asp Val Trp Gln Asn Ala Val
115 120 125
Leu Ala Asn Pro Phe Ala Arg Gly Tyr Val Lys Ile Lys Asp Ala Phe
130 135 140
Thr Val Arg Asn Val Gln Glu Ser Leu Phe Lys Met Ser Ser Phe Gly
145 150 155 160
Lys His Ser Leu Leu Phe Asp Gln Ala Leu Leu Ala Leu Glu Gln Thr
165 170 175
Asp Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Met His Asn Thr Ile
180 185 190
His Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Phe Ser Ser Leu Glu
195 200 205
Tyr Ser Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
210 215 220
Lys Ile Trp Ala Val Trp Gln Glu Leu Gln Ser Arg Arg His Leu Gln
225 230 235 240
Phe Arg Thr Ala Asp Cys Ala Val Gly Leu Met Gly Gln Ala Met Arg
245 250 255
Pro Phe Asn Lys Asp Phe Asn His Asn Ser Phe Thr Lys Lys His Ala
260 265 270

Val Pro Asn Thr Val Phe Asp Tyr Glu Asp Leu Gly Tyr Asn Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ser Gly Leu Asn Leu Asn Glu Ile Glu Ala Leu Ile
 290 295 300
 Ala Lys Arg Lys Ser His Ala Arg Val Phe Ala Gly Phe Leu Leu Phe
 305 310 315 320
 Gly Leu Gly Thr Ser Ala Asp Ile His Leu Glu Ile Cys Lys Thr Ser
 325 330 335
 Glu Asn Cys His Asp Ala Gly Val Ile Phe Ile Leu Gly Gly Ser Ala
 340 345 350
 Glu Met His Trp Ala Tyr Asn Arg Leu Tyr Lys Tyr Asp Ile Thr Glu
 355 360 365
 Ala Leu Gln Glu Phe Asp Ile Asn Pro Glu Asp Val Phe His Ala Asp
 370 375 380
 Glu Pro Phe Phe Leu Arg Leu Ser Val Val Ala Val Asn Gly Thr Val
 385 390 395 400
 Ile Pro Ser Ser His Leu His Gln Pro Thr Ile Ile Tyr Glu Pro Gly
 405 410 415
 Glu

<210> 31
 <211> 403
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 31
 Asp His His Asp Asp His Gln Ser Gly Ser Ile Ala Gly Ser Gly Val
 1 5 10 15
 Arg Lys Asp Val Asn Thr Leu Thr Lys Ala Glu Thr Asp Asn Leu Arg
 20 25 30
 Glu Ala Leu Trp Gly Val Met Ala Asp His Gly Pro Asn Gly Phe Gln
 35 40 45
 Ala Ile Ala Ala Phe His Gly Lys Pro Ala Leu Cys Pro Met Pro Asp
 50 55 60
 Gly His Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Met Arg Ala His
 85 90 95
 Gly Ser His Val Gly Leu Pro Tyr Trp Asp Trp Thr Ala Ala Phe Thr
 100 105 110
 His Leu Pro Thr Leu Val Thr Asp Thr Asp Asn Asn Pro Phe Gln His
 115 120 125

Gly His Ile Asp Tyr Leu Asn Val Ser Thr Thr Arg Ser Pro Arg Asp
 130 135 140
 Met Leu Phe Asn Asp Pro Glu His Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Lys Phe Glu Val
 165 170 175
 Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly His
 180 185 190
 Ser Pro Tyr Gly Met Ser Thr Leu Asp Phe Thr Ala Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220
 Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asn His Ala Asn Cys Glu
 225 230 235 240
 Ile Gln Ala Met Lys Thr Pro Leu Arg Pro Phe Ser Asp Asp Ile Asn
 245 250 255
 His Asn Pro Val Thr Lys Ala Asn Ala Lys Pro Leu Asp Val Phe Glu
 260 265 270
 Tyr Asn Arg Leu Ser Phe Gln Tyr Asp Asn Leu Ile Phe His Gly Tyr
 275 280 285
 Ser Ile Pro Glu Leu Asp Arg Val Leu Glu Glu Arg Lys Glu Glu Asp
 290 295 300
 Arg Ile Phe Ala Ala Phe Leu Leu Ser Gly Ile Lys Arg Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Gln Pro Glu His Glu Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Ile Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Lys Val Met Lys Gln Leu His Leu
 355 360 365
 Arg His Asp Ser Asp Phe Thr Phe Arg Val Lys Ile Val Gly Thr Asp
 370 375 380
 Asp His Glu Leu Pro Ser Asp Ser Val Lys Ala Pro Thr Ile Glu Phe
 385 390 395 400
 Glu Pro Gly

<210> 32
 <211> 511
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 32
 Val His Arg Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
 1 5 10 15
 Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
 20 25 30
 Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
 35 40 45
 Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
 50 55 60
 Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
 65 70 75 80
 Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
 85 90 95
 Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
 100 105 110
 Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125
 Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Val Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Gln Tyr Ser Met Ser Thr Leu Glu Tyr
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285

Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
 290 295 300
 Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
 305 310 315 320
 Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
 325 330 335
 Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
 340 345 350
 Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
 355 360 365
 Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
 370 375 380
 Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
 385 390 395 400
 Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
 405 410 415
 Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
 420 425 430
 Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
 435 440 445
 Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
 450 455 460
 Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
 465 470 475 480
 Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
 485 490 495
 Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
 500 505 510

 <210> 33
 <211> 334
 <212> PRT
 <213> *Haliotis tuberculata*

 <400> 33
 His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg Gly
 1 5 10 15
 Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala His
 20 25 30
 Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser Gly
 35 40 45
 Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu Asn
 50 55 60

Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro Leu
 65 70 75 80
 Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe Glu
 85 90 95
 Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His Asn
 100 105 110
 Asn Ile His Ala Trp Ile Gly Gly Gly Glu Lys Tyr Ser Met Ser Ser
 115 120 125
 Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu Arg His Ser Asn
 130 135 140
 Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Asn
 145 150 155 160
 Arg Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro Leu
 165 170 175
 Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr
 180 185 190
 Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu Gly
 195 200 205
 Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln Leu
 210 215 220
 Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala Gly
 225 230 235 240
 Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile Ile
 245 250 255
 Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu Gly
 260 265 270
 Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr Glu
 275 280 285
 Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Val Phe
 290 295 300
 Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser Ser
 305 310 315 320
 Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
 325 330

<210> 34
 <211> 417
 <212> PRT
 <213> Haliotis tuberculata

<400> 34
 Ile Asp His Gln Asp Pro His His Asp Thr Ile Ile Arg Lys Asn Val
 1 5 10 15

Asp Asn Leu Thr Pro Glu Glu Ile Asn Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Ser Asp Lys Thr Ala Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Asp Ala Glu Lys Lys
 50 55 60
 Phe Ser Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Cys Leu
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser His Leu Pro
 100 105 110
 Asp Leu Val Leu Val Ser Ser Arg Thr Thr Pro Met Pro Tyr Ser Thr
 115 120 125
 Val Glu Ala Arg Asn Pro Trp Tyr Ser Gly His Ile Asp Thr Val Gly
 130 135 140
 Val Asp Thr Thr Arg Ser Val Arg Gln Glu Leu Tyr Glu Ala Pro Gly
 145 150 155 160
 Phe Gly His Tyr Thr Gly Val Ala Lys Gln Val Leu Leu Ala Leu Glu
 165 170 175
 Gln Asp Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn
 180 185 190
 Phe Ile His Ala Leu Val Gly Gly Ser Glu Pro Tyr Gly Met Ala Ser
 195 200 205
 Leu Arg Tyr Thr Thr Tyr Asp Pro Ile Phe Tyr Leu His His Ser Asn
 210 215 220
 Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly
 225 230 235 240
 Lys Pro Tyr Asn Ser Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro
 245 250 255
 Leu Gln Pro Phe Gly Leu Thr Asp Glu Ile Asn Pro Asp Asp Glu Thr
 260 265 270
 Arg Gln His Ala Val Pro Phe Ser Val Phe Asp Tyr Lys Asn Asn Phe
 275 280 285
 Asn Tyr Glu Tyr Asp Thr Leu Asp Phe Asn Gly Leu Ser Ile Ser Gln
 290 295 300
 Leu Asp Arg Glu Leu Ser Arg Arg Lys Ser His Asp Arg Val Phe Ala
 305 310 315 320
 Gly Phe Leu Leu His Gly Ile Gln Gln Ser Ala Leu Val Lys Phe Phe
 325 330 335
 Val Cys Lys Ser Asp Asp Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr

65		70		75		80
His Arg Leu Tyr	Thr Val Gln Phe Gln Asp Ala Leu Arg Arg	His Gly				
	85		90			95
Ala Thr Val Gly Val	Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser His					
	100		105			110
Leu Pro Glu Leu Val	Thr Met Glu Thr Tyr His Asp Ile Trp Ser Asn					
	115		120			125
Arg Asp Phe Pro Asn	Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu Gly					
	130		135			140
Glu Asn Ile Thr Thr	Glu Arg Glu Val Ile Ala Asp Lys Leu Phe Val					
	145		150			155
Lys Gly Gly His Val	Phe Asp Lys Leu Val Leu Gln Thr Ser His Pro					
	165		170			175
Ser Ala Glu Gln Glu	Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile					
	180		185			190
Leu His Asn Gly Val	His Thr Trp Val Gly Gly Ser Arg Thr Tyr Ser					
	195		200			205
Ile Gly His Leu His	Tyr Ala Phe Tyr Asp Pro Leu Phe Tyr Leu His					
	210		215			220
His Phe Gln Thr Asp	Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln Glu					
	225		230			235
Gln Arg Gly Leu Ser	Gly Asp Glu Ala His Cys Ala Leu Glu Gln Met					
	245		250			255
Arg Glu Pro Leu Lys	Pro Phe Ser Phe Gly Ala Pro Tyr Asn Trp Asn					
	260		265			270
Gln Leu Thr Gln Asp	Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr Arg					
	275		280			285
Lys Phe Gly Tyr Glu	Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser Val					
	290		295			300
Ala Glu Leu Asp Gln	Tyr Ile Ile Glu His Gln Glu Asn Asp Arg Val					
	305		310			315
Phe Ala Gly Phe Leu	Leu Ser Gly Phe Gly Gly Ser Ala Ser Val Asn					
	325		330			335
Phe Gln Val Cys Arg	Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr Phe					
	340		345			350
Thr Val Leu Gly Gly	Ser Ala Glu Met Ala Trp Ala Phe Asp Arg Leu					
	355		360			365
Tyr Lys Tyr Asp Ile	Thr Glu Thr Leu Glu Lys Met His Leu Arg Tyr					
	370		375			380
Asp Asp Asp Phe Thr	Ile Ser Val Ser Leu Thr Ala Asn Asn Gly Thr					
	385		390			395
						400

Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln Arg
 405 410 415

Gly His

<210> 37

<211> 416

<212> PRT

<213> Haliotis tuberculata

<400> 37

Arg Asp Ile Asn Thr Arg Ser Met Ser Pro Asn Arg Val Arg Arg Glu
 1 5 10 15

Leu Ser Asp Leu Ser Ala Arg Asp Leu Ser Ser Leu Lys Ser Ala Leu
 20 25 30

Arg Asp Leu Gln Glu Asp Asp Gly Pro Asn Gly Tyr Gln Ala Leu Ala
 35 40 45

Ala Phe His Gly Leu Pro Ala Gly Cys His Asp Ser Arg Gly Asn Glu
 50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro Gln Trp His Arg
 65 70 75 80

Leu Tyr Thr Leu Gln Leu Glu Met Ala Leu Arg Arg His Gly Ser Ser
 85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Glu Leu Pro
 100 105 110

Ser Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp His Asp Ala Val
 115 120 125

Val Asn Asn Pro Phe Ser Lys Gly Phe Val Lys Phe Ala Asn Thr Tyr
 130 135 140

Thr Val Arg Asp Pro Gln Glu Met Leu Phe Gln Leu Cys Glu His Gly
 145 150 155 160

Glu Ser Ile Leu Tyr Glu Gln Thr Leu Leu Ala Leu Glu Gln Thr Asp
 165 170 175

Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Leu His Asn Val Ile His
 180 185 190

Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Leu Ser Ser Leu His Tyr
 195 200 205

Ala Ser Tyr Asp Pro Phe Phe Phe Ile His His Ser Phe Val Asp Lys
 210 215 220

Met Trp Val Val Trp Gln Ala Leu Gln Lys Arg Arg Lys Leu Pro Tyr
 225 230 235 240

Lys Arg Ala Asp Cys Ala Val Asn Leu Met Thr Lys Pro Met Arg Pro
 245 250 255

Phe Asp Ser Asp Met Asn Gln Asn Pro Phe Thr Lys Met His Ala Val
 260 265 270
 Pro Asn Thr Leu Tyr Asp Tyr Glu Thr Leu Tyr Tyr Ser Tyr Asp Asn
 275 280 285
 Leu Glu Ile Gly Gly Arg Asn Leu Asp Gln Leu Gln Ala Glu Ile Asp
 290 295 300
 Arg Ser Arg Ser His Asp Arg Val Phe Ala Gly Phe Leu Leu Arg Gly
 305 310 315 320
 Ile Gly Thr Ser Ala Asp Val Arg Phe Trp Ile Cys Arg Asn Glu Asn
 325 330 335
 Asp Cys His Arg Gly Gly Ile Ile Phe Ile Leu Gly Gly Ala Lys Glu
 340 345 350
 Met Pro Trp Ser Phe Asp Arg Asn Phe Lys Phe Asp Ile Thr His Val
 355 360 365
 Leu Glu Asn Ala Gly Ile Ser Pro Glu Asp Val Phe Asp Ala Glu Glu
 370 375 380
 Pro Phe Tyr Ile Lys Val Glu Ile His Ala Val Asn Lys Thr Met Ile
 385 390 395 400
 Pro Ser Ser Val Ile Pro Ala Pro Thr Ile Ile Tyr Ser Pro Gly Glu
 405 410 415

<210> 38

<211> 402

<212> PRT

<213> *Haliotis tuberculata*

<400> 38

Gly Arg Ala Ala Asp Ser Ala His Ser Ala Asn Ile Ala Gly Ser Gly
 1 5 10 15
 Val Arg Lys Asp Val Thr Thr Leu Thr Val Ser Glu Thr Glu Asn Leu
 20 25 30
 Arg Gln Ala Leu Gln Gly Val Ile Asp Asp Thr Gly Pro Asn Gly Tyr
 35 40 45
 Gln Ala Ile Ala Ser Phe His Gly Ser Pro Pro Met Cys Glu Met Asn
 50 55 60
 Gly Arg Lys Val Ala Cys Cys Ala His Gly Met Ala Ser Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Val Lys Gln Met Glu Asp Ala Leu Ala Asp His
 85 90 95
 Gly Ser His Ile Gly Ile Pro Tyr Trp Asp Trp Thr Thr Ala Phe Thr
 100 105 110

Glu Leu Pro Ala Leu Val Thr Asp Ser Glu Asn Asn Pro Phe His Glu
 115 120 125
 Gly Arg Ile Asp His Leu Gly Val Thr Thr Ser Arg Ser Pro Arg Asp
 130 135 140
 Met Leu Phe Asn Asp Pro Glu Gln Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Tyr Cys Gln Phe Glu Val
 165 170 175
 Gln Phe Glu Leu Thr His Asn Ala Ile His Ser Trp Thr Gly Gly Arg
 180 185 190
 Ser Pro Tyr Gly Met Ser Thr Leu Glu Phe Thr Ala Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220
 Ala Leu Gln Lys Tyr Arg Gly Leu Pro Tyr Asn Glu Ala His Cys Glu
 225 230 235 240
 Ile Gln Val Leu Lys Gln Pro Leu Arg Pro Phe Asn Asp Asp Ile Asn
 245 250 255
 His Asn Pro Ile Thr Lys Thr Asn Ala Arg Pro Ile Asp Ser Phe Asp
 260 265 270
 Tyr Glu Arg Phe Asn Tyr Gln Tyr Asp Thr Leu Ser Phe His Gly Lys
 275 280 285
 Ser Ile Pro Glu Leu Asn Asp Leu Leu Glu Glu Arg Lys Arg Glu Glu
 290 295 300
 Arg Thr Phe Ala Ala Phe Leu Leu Arg Gly Ile Gly Cys Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Arg Pro Asn Gly Asp Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Val Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Arg Val Met Asn Gln Leu His Leu
 355 360 365
 Gln Tyr Asp Ser Asp Phe Ser Phe Arg Val Lys Leu Val Ala Thr Asn
 370 375 380
 Gly Thr Glu Leu Ser Ser Asp Leu Leu Lys Ser Pro Thr Ile Glu His
 385 390 395 400
 Glu Leu

<210> 39
 <211> 515

<212> PRT
 <213> *Haliotis tuberculata*

 <220>
 <221> misc_feature
 <222> (425)..(425)
 <223> "Xaa" is any naturally-occurring amino acid residue, including Tyr

 <400> 39
 Gly Ala His Arg Gly Pro Val Glu Glu Thr Glu Val Thr Arg Gln His
 1 5 10 15

 Thr Asp Gly Asn Ala His Phe His Arg Lys Glu Val Asp Ser Leu Ser
 20 25 30

 Leu Asp Glu Ala Asn Asn Leu Lys Asn Ala Leu Tyr Lys Leu Gln Asn
 35 40 45

 Asp His Ser Leu Thr Gly Tyr Glu Ala Ile Ser Gly Tyr His Gly Tyr
 50 55 60

 Pro Asn Leu Cys Pro Glu Glu Gly Asp Asp Lys Ile Pro Leu Leu Arg
 65 70 75 80

 Pro Arg Met Gly Ile Phe Pro Tyr Trp His Arg Leu Leu Thr Ile Gln
 85 90 95

 Leu Glu Arg Ala Leu Glu His Asn Gly Ala Leu Leu Gly Val Pro Tyr
 100 105 110

 Trp Asp Trp Asn Lys Asp Leu Ser Ser Leu Pro Ala Phe Phe Ser Asp
 115 120 125

 Ser Ser Asn Asn Asn Pro Tyr Phe Lys Tyr His Ile Ala Gly Val Gly
 130 135 140

 His Asp Thr Val Arg Glu Pro Thr Ser Leu Ile Tyr Asn Gln Pro Gln
 145 150 155 160

 Ile His Gly Tyr Asp Tyr Leu Tyr Tyr Leu Ala Leu Thr Thr Leu Glu
 165 170 175

 Glu Asn Asn Tyr Trp Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn
 180 185 190

 Ala Val His Ser Trp Leu Gly Gly Ser Gln Lys Tyr Ser Met Ser Thr
 195 200 205

 Leu Glu Tyr Ser Ala Phe Asp Pro Val Phe Met Ile Leu His Ser Gly
 210 215 220

 Leu Asp Arg Leu Trp Ile Ile Trp Gln Glu Leu Gln Lys Ile Arg Arg
 225 230 235 240

 Lys Pro Tyr Asn Phe Ala Lys Cys Ala Tyr His Met Met Glu Glu Pro
 245 250 255

 Leu Ala Pro Phe Ser Tyr Pro Ser Ile Asn Gln Asp Glu Phe Thr Arg
 260 265 270

 Ala Asn Ser Lys Pro Ser Thr Val Phe Asp Ser His Lys Phe Gly Tyr

275 280 285
 His Tyr Asp Asn Leu Asn Val Arg Gly His Ser Ile Gln Glu Leu Asn
 290 295 300
 Thr Ile Ile Asn Asp Leu Arg Asn Thr Asp Arg Ile Tyr Ala Gly Phe
 305 310 315 320
 Val Leu Ser Gly Ile Gly Thr Ser Ala Ser Val Lys Ile Tyr Leu Arg
 325 330 335
 Thr Asp Asp Asn Asp Glu Glu Val Gly Thr Phe Thr Val Leu Gly Gly
 340 345 350
 Glu Arg Glu Met Pro Trp Ala Tyr Glu Arg Val Phe Lys Tyr Asp Ile
 355 360 365
 Thr Glu Val Ala Asp Arg Leu Lys Ile Lys Leu Trp Gly His Pro Leu
 370 375 380
 Thr Ser Gly Thr Gly Asp His Ile Leu Thr Asn Gly Ile Gly Gly Lys
 385 390 395 400
 Gln Glu Pro Thr Gln Ile Leu Ser Ser Ser Thr Asp Leu Pro Ile Met
 405 410 415
 Thr Thr Met Phe Leu Leu Ser Gln Xaa Gly Arg Asn Leu His Ile Pro
 420 425 430
 Pro Lys Val Val Val Lys Lys Gly Thr Arg Ile Glu Phe His Pro Val
 435 440 445
 Asp Asp Ser Val Thr Arg Pro Val Val Asp Leu Gly Ser Tyr Thr Ala
 450 455 460
 Leu Phe Asn Cys Val Val Pro Pro Phe Thr Tyr His Gly Phe Glu Leu
 465 470 475 480
 Asn His Val Tyr Ser Val Lys Pro Gly Asp Tyr Tyr Val Thr Gly Pro
 485 490 495
 Thr Arg Asp Leu Cys Gln Asn Ala Asp Val Arg Ile His Ile His Val
 500 505 510
 Glu Asp Glu
 515

<210> 40
 <211> 322
 <212> PRT
 <213> Megathura crenulata

<400> 40
 Gly Leu Pro Tyr Trp Asp Trp Thr Glu Pro Met Thr His Ile Pro Gly
 1 5 10 15
 Leu Ala Gly Asn Lys Thr Tyr Val Asp Ser His Gly Ala Ser His Thr
 20 25 30
 Asn Pro Phe His Ser Ser Val Ile Ala Phe Glu Glu Asn Ala Pro His

<213> Megathura crenulata

<400> 41

Val Lys Phe Asp Lys Val Pro Arg Ser Arg Leu Ile Arg Lys Asn Val
 1 5 10 15

Asp Arg Leu Ser Pro Glu Glu Met Asn Glu Leu Arg Lys Ala Leu Ala
 20 25 30

Leu Leu Lys Glu Asp Lys Ser Ala Gly Gly Phe Gln Gln Leu Gly Ala
 35 40 45

Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Ser Lys Lys
 50 55 60

Phe Ala Cys Cys Val His Gly Met Ser Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Leu Thr Val Gln Ser Glu Asn Ala Leu Arg Arg His Gly Tyr Asp
 85 90 95

Gly Ala Leu Pro Tyr Trp Asp Trp Thr Ser Pro Leu Asn His Leu Pro
 100 105 110

Glu Leu Ala Asp His Glu Lys Tyr Val Asp Pro Glu Asp Gly Val Glu
 115 120 125

Lys His Asn Pro Trp Phe Asp Gly His Ile Asp Thr Val Asp Lys Thr
 130 135 140

Thr Thr Arg Ser Val Gln Asn Lys Leu Phe Glu Gln Pro Glu Phe Gly
 145 150 155 160

His Tyr Thr Ser Ile Ala Lys Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175

Asn Phe Cys Asp Phe Glu Ile Gln Tyr Glu Ile Ala His Asn Tyr Ile
 180 185 190

His Ala Leu Val Gly Gly Ala Gln Pro Tyr Gly Met Ala Ser Leu Arg
 195 200 205

Tyr Thr Ala Phe Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr Asp
 210 215 220

Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240

Tyr Asn Val Ala Asn Cys Ala Val Thr Ser Met Arg Glu Pro Leu Gln
 245 250 255

Pro Phe Gly Leu Ser Ala Asn Ile Asn Thr Asp His Val Thr Lys Glu
 260 265 270

His Ser Val Pro Phe Asn Val Phe Asp Tyr Lys Thr Asn Phe Asn Tyr
 275 280 285

Glu Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asn
 290 295 300

Lys Lys Leu Glu Ala Ile Lys Ser Gln Asp Arg Phe Phe Ala Gly Phe
305 310 315 320

Leu Leu Ser Gly Phe Lys Lys Ser Ser Leu Val Lys Phe Asn Ile Cys
325 330 335

Thr Asp Ser Ser Asn Cys His Pro Ala Gly Glu Phe Tyr Leu Leu Gly
340 345 350

Asp Glu Asn Glu Met Pro Trp Ala Tyr Asp Arg Val Phe Lys Tyr Asp
355 360 365

Ile Thr Glu Lys Leu His Asp Leu Lys Leu His Ala Glu Asp His Phe
370 375 380

Tyr Ile Asp Tyr Glu Val Phe Asp Leu Lys Pro Ala Ser Leu Gly Lys
385 390 395 400

Asp Leu Phe Lys Gln Pro Ser Val Ile His Glu Pro Arg Ile
405 410

<210> 42

<211> 411

<212> PRT

<213> Megathura crenulata

<400> 42

Gly His His Glu Gly Glu Val Tyr Gln Ala Glu Val Thr Ser Ala Asn
1 5 10 15

Arg Ile Arg Lys Asn Ile Glu Asn Leu Ser Leu Gly Glu Leu Glu Ser
20 25 30

Leu Arg Ala Ala Phe Leu Glu Ile Glu Asn Asp Gly Thr Tyr Glu Ser
35 40 45

Ile Ala Lys Phe His Gly Ser Pro Gly Leu Cys Gln Leu Asn Gly Asn
50 55 60

Pro Ile Ser Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
65 70 75 80

Arg Leu Tyr Val Val Val Val Glu Asn Ala Leu Leu Lys Lys Gly Ser
85 90 95

Ser Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Arg Ile Glu His Leu
100 105 110

Pro His Leu Ile Ser Asp Ala Thr Tyr Asn Ser Arg Gln His His
115 120 125

Tyr Glu Thr Asn Pro Phe His His Gly Lys Ile Thr His Glu Asn Glu
130 135 140

Ile Thr Thr Arg Asp Pro Lys Asp Ser Leu Phe His Ser Asp Tyr Phe
145 150 155 160

Tyr Glu Gln Val Leu Tyr Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
165 170 175

Glu Ile Gln Leu Glu Ile Leu His Asn Ala Leu His Ser Leu Leu Gly
 180 185 190
 Gly Lys Gly Lys Tyr Ser Met Ser Asn Leu Asp Tyr Ala Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Thr Thr Asp Arg Ile Trp Ala Ile
 210 215 220
 Trp Gln Asp Leu Gln Arg Phe Arg Lys Arg Pro Tyr Arg Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Gln Leu Met His Thr Pro Leu Gln Pro Phe Asp Lys Ser
 245 250 255
 Asp Asn Asn Asp Glu Ala Thr Lys Thr His Ala Thr Pro His Asp Gly
 260 265 270
 Phe Glu Tyr Gln Asn Ser Phe Gly Tyr Ala Tyr Asp Asn Leu Glu Leu
 275 280 285
 Asn His Tyr Ser Ile Pro Gln Leu Asp His Met Leu Gln Glu Arg Lys
 290 295 300
 Arg His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly Thr
 305 310 315 320
 Ser Ala Asp Gly His Val Phe Val Cys Leu Pro Thr Gly Glu His Thr
 325 330 335
 Lys Asp Cys Ser His Glu Ala Gly Met Phe Ser Ile Leu Gly Gly Gln
 340 345 350
 Thr Glu Met Ser Phe Val Phe Asp Arg Leu Tyr Lys Leu Asp Ile Thr
 355 360 365
 Lys Ala Leu Lys Lys Asn Gly Val His Leu Gln Gly Asp Phe Asp Leu
 370 375 380
 Glu Ile Glu Ile Thr Ala Val Asn Gly Ser His Leu Asp Ser His Val
 385 390 395 400
 Ile His Ser Pro Thr Ile Leu Phe Glu Ala Gly
 405 410

<210> 43

<211> 111

<212> PRT

<213> Megathura crenulata

<400> 43

Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile Arg
 1 5 10 15

Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val Lys
 20 25 30

Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala Ala
50 55 60

Ser Lys Arg Phe Ala Cys Val His Gly Met Pro Thr Phe Pro Gln
65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys His
85 90 95

Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg
100 105 110

<210> 44

<211> 317

<212> PRT

<213> Megathura crenulata

<400> 44

Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
1 5 10 15

Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
20 25 30

Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
35 40 45

Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
50 55 60

His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
65 70 75 80

Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
85 90 95

Ala Trp Val Gly Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
100 105 110

Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
115 120 125

Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
130 135 140

Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
145 150 155 160

Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
165 170 175

Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
180 185 190

Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Tyr
195 200 205

Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
210 215 220

Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
225 230 235 240

Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
245 250 255

Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
260 265 270

Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
275 280 285

Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
290 295 300

Ile Pro Pro Pro Ala Ile Ile Phe Glu Arg Gly His Ala
305 310 315

<210> 45

<211> 411

<212> PRT

<213> Megathura crenulata

<400> 45

Asp Ala Lys Asp Phe Gly His Ser Arg Lys Ile Arg Lys Ala Val Asp
1 5 10 15

Ser Leu Thr Val Glu Glu Gln Thr Ser Leu Arg Arg Ala Met Ala Asp
20 25 30

Leu Gln Asp Asp Lys Thr Ser Gly Gly Phe Gln Gln Ile Ala Ala Phe
35 40 45

His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Glu Lys Lys Phe
50 55 60

Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg Leu
65 70 75 80

Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Phe Thr Gly
85 90 95

Gly Leu Pro Tyr Trp Asp Trp Thr Arg Ser Met Ser Ala Leu Pro His
100 105 110

Phe Val Ala Asp Pro Thr Tyr Asn Asp Ala Ile Ser Ser Gln Glu Glu
115 120 125

Asp Asn Pro Trp His His Gly His Ile Asp Ser Val Gly His Asp Thr
130 135 140

Thr Arg Asp Val Arg Asp Asp Leu Tyr Gln Ser Pro Gly Phe Gly His
145 150 155 160

Tyr Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Phe Glu Gln Asp Ser
165 170 175

Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile His
180 185 190

Ala Leu Ile Gly Gly Asn Glu Pro Tyr Ser Met Ser Ser Leu Arg Tyr
195 200 205

Thr Thr Tyr Asp Pro Ile Phe Leu His His Ser Ser Thr Asp Arg
210 215 220

Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro Tyr
225 230 235 240

Asn Thr Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln Pro
245 250 255

Phe Gly Leu Asp Ser Val Ile Asn Pro Asp Asp Glu Thr Arg Glu His
260 265 270

Ser Val Pro Phe Arg Val Phe Asp Tyr Lys Asn Asn Phe Asp Tyr Glu
275 280 285

Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp Arg
290 295 300

Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe Leu
305 310 315 320

Leu His Glu Ile Gly Gln Ser Ala Lys His Asn Val Ser Asp Cys Asp
325 330 335

His Tyr Ala Gly Glu Phe Tyr Ile Leu Gly Asp Glu Ala Glu Met Pro
340 345 350

Trp Arg Tyr Asp Arg Val Tyr Lys Tyr Glu Ile Thr Gln Gln Leu His
355 360 365

Asp Leu Asp Leu His Val Gly Asp Asn Phe Phe Leu Lys Tyr Glu Ala
370 375 380

Phe Asp Leu Asn Gly Gly Ser Leu Gly Gly Ser Ile Phe Ser Gln Pro
385 390 395 400

Ser Val Ile Phe Glu Pro Ala Ala Gly Met Phe
405 410

<210> 46

<211> 109

<212> PRT

<213> Megathura crenulata

<400> 46

Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
1 5 10 15

His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
20 25 30

Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
50 55 60

Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
65 70 75 80

Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
85 90 95

Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Leu Pro Arg
100 105

<210> 47

<211> 329

<212> PRT

<213> Megathura crenulata

<400> 47

Met Ala Val Phe Pro His Trp His Arg Leu Phe Val Lys Gln Met Glu
1 5 10 15

Asp Ala Leu Ala Ala His Gly Ala His Ile Gly Ile Pro Tyr Trp Asp
20 25 30

Trp Thr Ser Ala Phe Ser His Leu Pro Ala Leu Val Thr Asp His Glu
35 40 45

Asn Asn Pro Phe His His Gly His Ile Gly His Leu Asn Val Asp Thr
50 55 60

Ser Arg Ser Pro Arg Asp Met Leu Phe Asn Asp Pro Glu Gln Gly Ser
65 70 75 80

Glu Ser Phe Phe Tyr Arg Gln Val Leu Leu Thr Leu Glu Gln Thr Asp
85 90 95

Phe Cys Gln Phe Glu Val Gln Phe Glu Leu Thr His Asn Ala Ile His
100 105 110

Ser Trp Thr Gly Gly His Thr Pro Tyr Gly Met Ser Ser Leu Glu Tyr
115 120 125

Thr Ala Tyr Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr Asp Arg
130 135 140

Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Leu Pro Tyr
145 150 155 160

Asn Ala Ala His Cys Asp Ile Gln Val Leu Lys Gln Pro Leu Lys Pro
165 170 175

Phe Ser Glu Ser Arg Asn Pro Asn Pro Val Thr Arg Ala Asn Ser Arg
180 185 190

Ala Val Asp Ser Phe Asp Tyr Glu Lys Phe Asn Tyr Gln Tyr Asp Thr
195 200 205

Leu Thr Phe His Gly Leu Ser Ile Pro Glu Leu Asp Ala Met Leu Gln
210 215 220

Glu Arg Lys Lys Glu Glu Arg Thr Phe Ala Ala Phe Leu Leu His Gly
225 230 235 240

Phe Gly Ala Ser Ala Asp Val Ser Phe Asp Val Cys Thr Pro Asp Gly
 245 250 255
 His Cys Ala Phe Ala Gly Thr Phe Ala Val Leu Gly Gly Glu Leu Glu
 260 265 270
 Met Pro Trp Ser Phe Glu Arg Leu Phe Arg Tyr Asp Ile Thr Lys Val
 275 280 285
 Leu Lys Gln Met Asn Leu His Tyr Asp Ser Glu Phe His Phe Glu Leu
 290 295 300
 Lys Ile Val Gly Thr Asp Gly Thr Glu Leu Pro Ser Asp Arg Ile Lys
 305 310 315 320
 Ser Pro Thr Ile Glu His His Gly Gly
 325

<210> 48
 <211> 103
 <212> PRT
 <213> Megathura crenulata

<400> 48
 Gly His Asp His Ser Glu Arg His Asp Gly Phe Phe Arg Lys Glu Val
 1 5 10 15
 Gly Ser Leu Ser Leu Asp Glu Ala Asn Asp Leu Lys Asn Ala Leu Tyr
 20 25 30
 Lys Leu Gln Asn Asp Gln Gly Pro Asn Gly Tyr Glu Ser Ile Ala Gly
 35 40 45
 Tyr His Gly Tyr Pro Phe Leu Cys Pro Glu His Gly Glu Asp Gln Tyr
 50 55 60
 Ala Cys Cys Val His Gly Met Pro Val Phe Pro His Trp His Arg Leu
 65 70 75 80
 His Thr Ile Gln Phe Glu Arg Ala Leu Lys Glu His Gly Ser His Leu
 85 90 95
 Gly Leu Pro Tyr Trp Asp Trp
 100

<210> 49
 <211> 1269
 <212> DNA
 <213> Haliotis tuberculata

<400> 49
 ggcttggttca gtttctactc gtccgcccttg tgggtgggggc tggagcagac aacgtcggtca 60
 gaaaggacgt gagtcacctc acggatgacg aggtgcaagc tctccacggc gccctccatg 120
 acgtcactgc atctacaggg cctctgagtt tcgaagacat aacatctttac catgcccgac 180
 cagcgtcggt tgactacaag ggacggaaga tcgcctgctg tgtccacggg atgccccagt 240
 tccccctctg gcacagggca tatgtcgtcc aagccgagcg ggactgtgtg tccaaacgga 300
 agactgtcgg aatgccttac tgggactgga cgcaaacgct gactcactta ccactctcttg 360
 tgactgaacc catctacatt gacagtaaag gtggaagggc tcaaaccaac tactcgttacc 420
 gcggcgagat agcgtttcatc aataagaaga ctgcgcgagc tgtagatgat cgctctattcg 480

agaaggtgga	gcttgggtcac	tacacacatc	tatatggagac	gtctctcgac	gctctcgaa	540
aggacgaatt	ctgtaaaattt	gaaatccagt	togagttggc	tcataatgct	atccattact	600
tgttggggg	taaatttgaa	tattcaatgt	caaaacttga	atacactccc	tacgacccca	660
tcttcttctt	ccaccactcc	aacgttgacc	gcttcttcgc	catctggcag	cgtcttcagg	720
aactgcgagg	aaagaatccc	aatgcaatgg	actgtgcaca	tgaactcgct	caccagcaac	780
tccaaccctt	caacagggac	agcaatccag	tccagctcac	aaaggaccac	tcgacacctg	840
ctgacctctt	tgattacaaa	caacttggat	acagctacga	cagcttaaac	ctgaatggaa	900
tgacgccaga	acagctgaaa	acagaactag	acgaacgcc	ctccaaagaa	cgtgcggttt	960
caagcttcgg	actcagtgge	tttgggggtt	ctgccaacgt	tgttgtctat	gcatgtgttc	1020
ctgatgatga	tccacgcagt	gatgactact	gcgagaaagc	aggcgacttc	ttcatcttct	1080
gggggtcaaa	gcaattgcgc	tggagattct	acagaccctt	cttctatgat	gtactctga	1140
cgttatcatca	cttggagatt	ccgctaagt	ccgactacta	tgtgaaaaca	gaactcttca	1200
gcgtgaatgg	cacagcactt	tcacttgatc	ttcttctctc	accaactgtt	gcctaccgac	1260
ctgggaaag						1269

<210> 50

<211> 569

<212> DNA

<213> *Haliotis tuberculata*

<400> 50

ggtcttccgt	actgggagtg	gacgcagcat	ctgactcaac	tcccagatct	ggtgtcgac	60
cccttgtttt	tcgaccccgga	aggaggaaag	gcccatggga	acgcattgta	tcgtgggaa	120
atcaagtttg	agaataagaa	gactgcaaga	gctgttgacg	atcgctcttt	cgagaaggtt	180
ggaccaggag	agaattaccgc	actctttgaa	ggaattctcg	atgctcttga	acaggtatga	240
ttctgcaact	tcgagatcca	gtttgagttg	gctcacaacg	ctatccacta	cctggttggc	300
ggccgttcaca	cgtatcccat	gtctcatctc	gagttacacc	ctcctacgac	cccctctctc	360
tcctctcatca	ctccaacacc	ggaccgcgat	ttcgccatct	gggaacgctc	tcaggtactc	420
agaggaagag	acccaacac	cgcgcagctg	gcacacaccc	tcattccatga	gcccatggaa	480
ccgttccgtc	gggagctcgaa	ccctcttgac	ctcaccaggg	aaaactccaa	accaattgac	540
agctttgatt	atgcccaact	tggctacaa				569

<210> 51

<211> 1246

<212> DNA

<213> *Haliotis tuberculata*

<400> 51

gttacagagg	ccccagctcc	ctcctcggat	gctcactctg	ccgtcaggaa	ggatatcaac	60
catcttgagac	gcgagggaggt	gtacgagctg	cgcagagcta	tggagagatt	ccaggccgac	120
acatccggtt	atgggttacca	ggctacgggt	gagtatcacg	gcttactctg	tcgatgtcca	180
ttcccgcagg	ccacaaatag	gttgcctctg	tgcatccacg	gcattggcag	attccctcat	240
tggcacagac	tgttctgcac	ccaggaggaa	gatgctctga	tcaggcgagg	atcgctcata	300
gggggtccctt	actgggagctg	gactcagcct	atggcgctat	tcccaggact	tcgacacaa	360
gccacctata	gagatcccat	cagcggggag	agcagacaca	accccttcca	cgatgttga	420
gttgctcttg	aaaaatggacg	tacagaacgt	caccagagata	gtagatttgt	tgaacaacct	480
ttatttggca	aaatcatcgcg	ttctctcgac	agtatagtct	atgcttttga	gcaggaggac	540
ttctgcgatt	ttgaagtcca	atttgagatg	accataata	atatccacgc	ctggatttgt	600
ggcggcgaga	agtatctcat	gtctctctca	cactacacac	ccttcgaccc	tatctctcat	660
ctctgcactc	cccaactcag	ccggctctgg	gcaatttggc	aagcgttgca	gatcacgaag	720
aacaggccctt	acaaaggctca	ttgtgcttgg	tctgaggaa	gccagcctct	caaaccttct	780
ctcttcagtt	ccccactgaa	caacaacgaa	aaaactctacg	aaaactcgtg	gccaccacac	840
gtttacagact	acgaaggagt	ccttggtctat	acttatgatg	acctcaactt	cgggggcgatg	900
gacctgggtc	agcttgaggaa	atataccag	aggcagagac	agagagacag	gacctttgtg	960
gggtttcttc	tgtcacatat	tggatcatca	gcgaatgttg	aaatcattat	agaccattgg	1020
actcttcata	ctcccgctggg	cacgtttgtc	gttcttggcg	gagagaagga	gatgaaatgg	1080
ggatttgacc	gtttgtacaa	atatgagatt	acagatgaac	ttagggcaact	taactctcgt	1140
gctgatgatg	ttttcagcat	ctctgtttaa	gtaactgatg	ttgatggcag	tgagctgtcc	1200
tctgaactca	tcccatctgc	tgtctatcac	ttogaacgaa	gccata		1246

<210> 52
 <211> 1242
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 52
 gtaccatcca ggcgtgacgag tacgacgaag ttgtaactgc tgcaagccac atcagaaaaga 60
 atttaaaaaga tctgtccaaag ggagaagtag agagcctaag gctgccttc ctgcaacttc 120
 agaacgcagg agtcctatgag aatattgccca agttccacgg caagcctggg ttgtgtgatg 180
 ataacggctgc caaggtgtgcc tgttgtgtcc atggaatgcc caccctcccc cagtgggaca 240
 ggcctctatgt cctccagggtg gagaatgctt tgctggagag aggatctgcc gtctctgtgc 300
 cctactggga ctggactgaa acattttacag agctgccatc ttgtatgtct gaggctacct 360
 atttcaattc ccgtcaacaa acgtttgacc ctaatccttt cttcagaggt aaaatcagtt 420
 ttgagaatgc tgttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaaagt catgttggtt ttgaaacagg acaactactg cgactctgag atacagtttg 540
 agatgggtcca caatgttctc catgcttggtc ttggtggaag agctacttat tctattttct 600
 ctcttgatta ttctgcattc gacctgtgtt ttttcttcca ccatgcgaag acagatagat 660
 tgttgggccat ctggcaggag ctgcagaggt acaggaagaa gccatacaat gaagcggatt 720
 gtggccattaa cctaatagcg aaacctctac atccctctga caacagtatg ctcaatcatg 780
 atctctgaac ctttaaatat tcaaaaccca ctgatggctt tgactaccag aacaactttg 840
 gatcaaatga tgacaacctt gagtccaatc atttcagtat tcccaggctt gaagaaatca 900
 ttctgtattag acaacgtcaa gatcgtgtgt ttgcaggatt cctccttcac aacattggga 960
 cctccggaac tgttgagata ttctgtctgt tccctaccac cagcggtagg caaaactgtg 1020
 aaaacaagac cggaaacatt gccgtactcg gaggagaac agagatggcg ttctattttg 1080
 acagactcta agggtttgac atcagtgaaa cactgagggg cctcggcata cagctggaca 1140
 gccatgactt tgacctcagc atcaagattc aaggagttaa tggatctcac cttgatccac 1200
 acatcctgcc agagccatcc ttgatttttg tgctgggttc aa 1242

<210> 53
 <211> 1257
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 53
 gttcttttct gcgtctctgat gggcattcag atgacatcct tgtgagaaaa gaagtgaaca 60
 gcttgacaac caggggagact gcactctctga tccatgctct gaaaagtatg cagggaagacc 120
 attcacctga cgggttccaa gccattgcct ctttccatgc tctgccacca ctctgccctt 180
 caccatctgc agctcaccgt tatgcttgct gtgtccacgg catggctaca ttccccaggt 240
 ggcacagatt gtacactgta cagtccagg atgcactgag gagacatgga gctacggtag 300
 gtgtaccgta ttgggatttg ctgcgaccgc agtctcacct accagagctt gtaccattgg 360
 agacatacca gatataattg agtaacagag atttccccaa tctttctac caagccaata 420
 ttgagtttga aggagaaaaa attacaacag agagagaagt cattgcagac aaactttttg 480
 tcaaaaggtg acacgtttttt gataaaactg tcttccaaac aagccactct agcgtgtgagc 540
 agggaaaacta ctgtgacttt gagattcagt ttgaaattct tcacacggcg gtcacacgt 600
 gggctcgagg cagtctgacc tactctatcg gacattctca ttacgcatc tacgaccctc 660
 tttctaccct tcaccatttc cagacagacc gtattttggc gatatttgagg gaactccagg 720
 aacagagagg gctctcgggt gatgaggctc actgtgctct cgagcaaatg agagaacat 780
 tgaagccttt cagcttctggc gctccttata actggaatca gctcacacag gatttctccc 840
 gaccgcgagg caccctcgac tacaggaagt ttggttatga atatgacaat ttagaattcc 900
 tgggaatgtc agttcgtgaa ctggatcaat acattattga acatcaagaa aatgatagag 960
 tattcgtctg gttcctgttg agtggattcg gagggtcccg atcagttaat tccagggttt 1020
 gttagagctga ttccactcgt caggatgctg ggtactctac cgttcttggt ggcagtgtct 1080
 agatggcgtg ggcatttgac aggcctttaca aatatgacat tactgaaact ctggagaaaa 1140
 tgcacctctg atatgatgat gacttcacaa tctctgtcag tctgaccgcc aacaacggaa 1200
 ctgtctctgag cagcagtcta atcccaacac cgagtgtcat attccagcgg ggaatc 1257

<210> 54
 <211> 1257
 <212> DNA
 <213> Megathura crenulata

<400> 54
 attctgccca cacagatgat ggacacactg aaccagtgat gattcgcaaa gatatacacac 60
 aattggacaaa gcgtcaacaa ctgtcactgg tgaagccct cgagtcctatg aaagccgacc 120
 attcatctga tgggttccag gcaatcgctt ccttccatgg tcttccctct ctttgttccat 180
 caccagctgc ttcaaaaggg ttgtcgctgt cgtccatagc catgggcaacg tccccacaat 240
 ggaccgcgtc gtacacagtc caattccaag attctctcag aaaacatggg cgagtcggtg 300
 gacttcogta ctgggactgg accctacctc gtcttgaatt accagagctc ctgaccgctc 360
 caactattca tgaccggcag acaggcagag atataccaaa tccatttatt ggttctaaaa 420
 tagagtttga aggagaaaac gtacatacta aaagagatat caatagggat cgtctcttcc 480
 agggatcaac aaaaacacat cataactggg ttattgagca agcactgctt gctcttgaac 540
 aaaccaacta ctgcgaactc gaggttcagt ttgaaattat gcataatggg gttcatacct 600
 ggggtggagg caaggagccc tatggaattg gccactgcga ttatgcttcc tatgatccac 660
 ttttctacat ccatcactcc caaactgatc gtatttgggg tatatggcaa tcggtgcagc 720
 gtttcagagg actttctgga tctgaggcta actgtgctgt aaatctcatg aaaactcctc 780
 tgaagccttt cagcttttga gccacatata atcttaata tcacacgcat gatttctcaa 840
 agcctgaaga tcacattcgac taccaaaagt ttggatacat atatgacat ctggaatttg 900
 cagggttggtc aattcgtggc attgaccata ttgtccgtaa caggcaggaa cattcaaggg 960
 tctttgcggg attcttgcct gaaggatttg gcacctctgc cactgtctcg ttccaggtct 1020
 ctgcgcacag gggagactgt gaagatcgag ggtacttcac cgtgttggga ggtgaaaaag 1080
 aaatgccttg gccctttgat cggctttaca agtacgacat aacagaaaac tttagcaaga 1140
 tgaaccttcg acatgacgaa atcttccaga ttgaagtaac cattacatcc tacgatggaa 1200
 ctgtactcga tagtggcctt attccacac cgtcaatcat ctatgatcct gctcacc 1257

<210> 55
 <211> 1254
 <212> DNA
 <213> Megathura crenulata

<400> 55
 atgatattag ttgcaccacc ctgtcgtctca acaaggttgc tcattgatctg agtacactga 60
 gtgagcgaga ttgtggaagc cttaaatatg ctttgagcag ctgtgcaggca gatacctcag 120
 cagatgggtt tgctgccatt gcatccttcc atggctctgc tgccaaatgt aatgacagcc 180
 acaataacga ggtggcatgc tgatccatg gaatgcctac attccccacc tggcacagac 240
 tctacacccct ccaatttgag caagctctaa gaagacatgg ctctagtsta gcagtaccct 300
 actggggactg gacaaaagcca atacataata ttccacatct gttccacagac aaagaatact 360
 acgatgtctg gagaaaataa gtaatgccaa atccatttgc ccagggttat gtcctctcac 420
 acgatacata caccgtaaga gacgtccaag aaggcctgtt ccacctgaca tcaacgggtg 480
 aacactcagc gcttctgcat caagctcttt tggcgctgga acagcacgac tactgcgatt 540
 ttgcagtcct gtttgaagtc atgcacaaca caatccatta cctagtggga ggaactcaag 600
 tctatttctt gcatcctct cattatgctt catatgatcc gatctcttc atacaccact 660
 cctttgtaga caaggttttg gctgtctggc aggcctctca agaaaagaga ggcccttccat 720
 cagaccgtgc tgactgcgct gttagtctga tgactcagaa catggggcct ttccattacg 780
 aaattaaoca taacctgctt accaagaaac atgcagttcc aaatgatgtt ttcaagtacg 840
 aactcctggg ttacagatgc gacaatctg aaatcgtgg tgcagggttc ctcttccagc 900
 aaaaggaat caaagacaaa cagcaccatg tgagagtgtt aacatcagaa gattgtcacc 960
 gaattagaac ctacgtgat gtccaattcc agatttggta aacatcagaa gattgtcacc 1020
 atggaggcca aatcttctgt cttgggggga ctaagagat ggcctgggct tataccggtt 1080
 tattcaagta cgtatttacc catgctcttc atgacgcaca catcactcca gaagacgtat 1140
 tccatccctc tgaaccttc ttcatcaagg tgtcagtgac agcgtcaac ggaacagttc 1200
 ttccggtctc aatcctgcat gccaccaaca ttatctatga acctggtctc ggtg 1254

<210> 56
 <211> 509
 <212> DNA
 <213> Megathura crenulata

<400> 56
 accatcacga agatcatcat tcttcttcta tggctggaca tgggtgcaga aaggaataca 60
 acacacttac cactgcagag gtggacaatc tcaaaagatgc catgagagcc gtcattggcag 120
 accacggctcc aaatggatag caggctatag cagcggtcca tggaaaccca ccaatgtgcc 180
 ctatgccaga tggaaagaat tactcgtgtt gtacacatgg catggctact tcccccaat 240
 ggacacagat gtacacaaaa cagatgggaag atgccttgac cgccccatgtt gccagagtgc 300
 gccttctcta ctgggacggg acaactgcct ttacagcttt gccaaactttt gtacacagatg 360
 aagaggacaa tcttctccat catggtcaca tagactattt gggagtggat acaactcggg 420
 cgccccgaga caagtgtgtc aatgatccag agcgaggatc agaactcgtc ttctacaggc 480
 aggttctctt ggctttggag cagacagat 509

<210> 57
 <211> 943
 <212> DNA
 <213> Megathura crenulata

<400> 57
 ggctgcctc actgggattg gaccatgcca atgagtcatt tggcagaact ggctacaagt 60
 gagactacc tcgatccagt tactggggaa actaaaaaca accctttcca tcaagcccaa 120
 gtggcggtttg aaaatgggtgt aacaagcagg aatcctgatg ccaaaactttt tatgaaccca 180
 actacaggag accacactta cctcttcgac agcatgatct acgcatttga gcagggaagac 240
 ttctgcgact tgaagtcaca atatgagctc acgcataatg caatacatgc atgggtttgga 300
 ggcatgtaaa agtattcaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tctgtctctg gccatttgcc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctggcgcctg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactgaa caacaacgag aaaaactgac acaactctgt cccactaac 540
 gtttatgact atgtggggat tttgactat cgaatgatg accttcagtt tggcggtatg 600
 accatgtcac aacttgagga atatatccac aagcagacac aacatgatag aacctttgca 660
 ggattctcc ttctatatat tggaaacatca gcaagcgtag atattctcat caatcgagaa 720
 ggtcatgata aatacaaaat gggaagtttt gtggtatccaa agaaatgaaa 780
 tggggccttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttcag cattactgtt gagatcacc atgttgatgg atctcccca 900
 tctgcagatc tcatccacc tctgtctata atctttgaac gtg 943

<210> 58
 <211> 1248
 <212> DNA
 <213> Megathura crenulata

<400> 58
 ctgatgccaa agactttggc catagcagaa aaatcaggaa agccgtgat tctctgacag 60
 tcgaagaaca aactctgttg aggcgagcta tggcagatct acaggagcac aaaaactcag 120
 ggggtttcca gcagattgca gcatccacg gagaaccaaa atggtgtcca agccccgaag 180
 cggaaaaaaa atttgcatgc tgtgttcacg gaatggctgt ttctccatca tggcagacat 240
 tgcagacagt tcaaggagaa aatgctctga ggaacatggt cttacttggt ggactggcct 300
 actgggagct gactgcata atagcgcctc ttccacattt tgttgcgat cctacttaca 360
 atgatgctat tccagccag gaagaagata acccatggca tcatggtcac atagactctg 420
 ttgggcata tactacaaga gatgtgcgtg atgatcttta tcaactctct gggttcggtc 480
 actacacaga tattgcaaaa caagtccttc tggcctttga gcaggagcat ttctgtgatt 540
 ttgagctaca atttgaatt gcccaataat tcatacatgc tctggttggt ggtaacgaac 600
 catacagatg gtcactcttg aggtatacta catacagatc aatctctctc tgcaccgct 660
 ccaatacaga ccgacttttg gccatttgcc aagctttgca aaaaacacgg gggaaccat 720
 acaacactgc aaactgtgcc attgcatcca tgaagaaacc acttcagcca ttgtgcttg 780
 atagtgtcat aaatccagat gacgaaactc gtgaacatc gggttctctt cgagtcttcg 840
 actacaagaa caacttcgac tatgagtatg agagcctggc atttaattgt ctgtctattg 900
 cccaactgga ccgagagttg cagagaagaa agtcacatga cagagtcttt gcaggattcc 960

tcttctcatga	aattggacag	tctgcaactcg	tgaatttcta	cgtttgcmaa	cacaatgtat	1020
ctgactgtgta	ccattatgct	ggagaattctt	acatttttggg	agatggaagct	gagatgtccct	1080
ggaggttatga	cctgtgtgtac	aagtaacgaga	taaacacagca	gctgcaactac	ttagatcttcc	1140
atgtgtggaga	taattttcttc	cttaaatatg	aagccttttga	tctggaatggt	ggaggtctttg	1200
gtggaagtat	cttttctcag	ccttcggtga	ttttcgagcc	agctgcag		1248

<210> 59
 <211> 1257
 <212> DNA
 <213> Megathura crenulata

gttcacacca	ggctgatgaa	tatcgtgagg	cagtaacaag	cgctagccac	ataagaaaaa	60
atatccggga	ccctctcagag	ggagaaaattg	agagcatcag	atctgctttc	ctccaaattc	120
aaaaagaggg	tatatatgaa	aacatttgcaa	agttccatgg	aaaaccaggga	ctttgtgaac	180
atgatggaca	tctgtgtgct	tggtgtgtcc	atggcatgcc	cacctttccc	cactggcaca	240
gactgtacgt	tcttccagggtg	gagaatgcgc	tcttagaacg	agggtctgca	gttgctgttc	300
cttactggga	ctggacggag	aaagctgact	ctctgcctc	attaactaat	gatgcaactt	360
atttcaattc	acgatcccgag	acctttgatc	ctaactcttt	cttcaggggga	catattgcct	420
tcgagaatgc	tgtagcgtcc	agagatcctc	agccagaact	atgggacaaat	aaggactctt	480
acgagaatgc	catgtctggct	cttgagcaag	acaactcttg	tgacttttag	attcagcttg	540
agctgataca	caacgcctct	cattctagac	ttggaggaaag	ggctaaatac	tccttttctg	600
ctcttgattc	taccgccttt	gatcctgtat	tttctcttca	ccatgcacaa	gttgacagaa	660
tctgtggccat	ctggcaggac	ttgcagagat	atagaaagaa	accatacaat	gaggctgact	720
gcgcagctaca	cgagatgcgt	aaacctcttc	aaccatttaa	taaccacagaa	cttaacagtg	780
attccatgac	gcttaaacac	aaacctccac	aagacagttt	tgattatcaa	aaccgcttca	840
ggtaaccaata	tgataaacctt	caatttaaac	acttcaagcat	acaaaagcta	gaccaaacta	900
ttcaggctag	aaaacaacac	gacagagttt	ttgtgtgctt	tattctctac	aacattggga	960
catctgctgt	tgtgatattt	tatattttgcg	ttgaacaagg	aggagaacaa	aactgcaacca	1020
caaaggcggg	ttctctcaag	atctctggggg	gagaaacagga	aatgccattc	cacttttgacc	1080
gcttgtacaa	atttgacata	acgtctgctc	tgcataaact	tggtgttccc	ttggacggac	1140
atggatttcga	catcaaaagt	gacgtcagag	ctgtcaatgg	atcgcatctt	gatcaacaca	1200
tcttcaacga	accgagtctg	ctttttgttc	ctggtgaacg	taagaatata	tattatg	1257

<210> 60
 <211> 1239
 <212> DNA
 <213> Megathura crenulata

atgggctttc	acaacataat	cttgtgcgaa	aagaagtaag	ctctcttaca	acactggaga	60
aacatttttt	gaggaaagct	ctcaagaaca	tgcaagcaga	tgattctcca	gacggatatt	120
aagctattgc	gtttcttcac	gctttgcttc	agctcttctc	agctccattc	gctgcacata	180
gacacgtctg	ttgcttccat	gggatggcta	ccttccctca	gtggcacaga	ctctacacag	240
ttcagttcga	agattctttg	aaacgacatg	gttctattgt	cggaactcca	tattgggatt	300
ggctgaaacc	gcagttctga	ctccctgatt	tggtgacaca	ggagacatac	gagcacctgt	360
tttcacacaa	aaaccttcca	aatccgttcc	tcaaggcaaa	tatagaattt	gaggggagagg	420
gagtaacaac	agagagggat	gttgatgctg	aaacctcttt	tgcaaaaagg	aactctggtt	480
acaacaactg	gttttgcatt	caggcactat	atgcactaga	acaagaaaat	tactgtgact	540
ttgaaataca	gttcgaattt	ttgcataatg	gaattcattc	atgggttggg	ggatcaaaag	600
ccatttcaat	aggttcattt	cattacgcat	catagcatct	actgtttctat	atccaccatt	660
cgacagacga	tcgcattttg	gctatctggc	aagctctcca	ggagcacaga	ggtcttttcc	720
ggaaggaaag	acactgcgcc	ctggagcaaa	tgaagagacc	tctcaaacct	ttcagctttg	780
gaagtcccta	taatttgaac	aaacgcactc	aagagttctc	caagcctgaa	gacacattga	840
attatcacgg	attcgggtat	gagtatgatt	ccctcgaaat	tggtggcatg	ctctgttcaa	900
gtttacataa	ctatataaaa	caacaacagg	aagctgatag	agttcttgca	ggattctctc	960
ttaaaagatt	tggaacatac	gcattccgat	cgtttgatgt	ctgcagacca	gaccagagtt	1020
gccaaagagg	tggaactctc	tcagttctcg	gtggaagtgc	agaaaatgcc	tggaagcttt	1080
acagggttca	caagtcagac	attacaaaaa	cgttgaaaga	catgaaactg	cgatcagctg	1140
acacatttac	catcaaggtt	catataaagg	atatagctgg	agctgagttg	gacagcgatc	1200
tgattccaac	tccttctggt	ctctctgaag	aaggaaagc			1239

<210> 61
 <211> 1251
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 61
 atgggatcaa tgtacgtcac gttgggtcgt atcggattcg tatggaacta tctgaaactca 60
 ccgagagaga tctcgcacgc ctgaaatctg caatgaggtc tctacaagct gacgatgggg 120
 tgaacgggta tcaagccatt gcatcattcc acgggtctccc ggcttcttgt catgatgatg 180
 agggacatga gattgcctgt tgtatccacg gaatgcccagt attcccacac tggcacaggc 240
 tttaacacct gcaaatggag atggctctgt tatctcacg agtctgtgt gctattccat 300
 actgggactg gaccaaacct atcagcaaac tgctgatct ctccaccagc cctgaatatt 360
 acgatccttg gagggatgca gttgtcaata atccatttgc taaaggctac attaaatccg 420
 aggcgcgtta cacgggttag gatcctcagg acattttgt ccacttgcag gacgaaacgg 480
 gaacatctgt tttgttagat caaactcttt tagccttaga gcagacagat tctgtgtatt 540
 ttgaggttca atttgaggtc gtccataatg ctattcacta ctgtgtgggt ggtcgacaag 600
 tttatgctct tctctctcaa cactatgctt catatgaccc agccttcttt attcatcact 660
 cctttgttga caaaatatgg gcagctctggc aagctctgca aaagaagaga aagcgtccct 720
 atcataaagc ggattgtgct cttaacatga tgaccaaacc aatgcgacca ttgtcacacg 780
 atttcaatca caatggattc acaaaaatgc acgcagctcc caacactcta ttgactttc 840
 agggactttt ctacacgtat gacaaacttag aaattgctgg catgaatgtt aatcagttgg 900
 aagcggaaat caaccggcga aaaagccaaa caagagctct tgccgggttc ctctcacatg 960
 gcattggaag atcagctgat gtacgatttt ggatttgcga gacagctgac gattgccacg 1020
 catctggcat gatctttatc ttaggaggtt cttaaagagat gcactgggccc tatgacagga 1080
 actttaacata cgacatctac caagctttga aggctcagtc catcacacct gaagatgtgt 1140
 ttgacactga tctccttttc ttcattaaag tggaggtcca tgggttaaac aagactgtct 1200
 tcccactctc agctatccca gcacctacta taactctact agctggtgaa g 1251

<210> 62
 <211> 1185
 <212> DNA
 <213> *Haliotis tuberculata*

<220>
 <221> misc_feature
 <222> (163)..(163)
 <223> "n" is a, g, c, or t, including c

<400> 62
 atcatattgc tggcagtgga gtcaggaaag acgtgacgtc tcttaccgca tctgagatag 60
 agaacctgag gcatcgtga caaagcgtga tggatgatga tggaccacat ggattccagg 120
 caattgctgc ttatcacgga agtctcccca tgtgtcacat gcntgatggt agagacgttg 180
 catgtgtgac tcatggaaatg gcatctttcc ctcaactggca cagactgttt gtgaaacaga 240
 tggaggatgc actggctgag catggagctc acattggcat accatactgg gattggacaa 300
 gtgctgttag tcatctgctt gccctagtga ctgaccacga gcacaatccc ttccaccacg 360
 gacatattgc tcatcggaat gtggatacat ctgcattctc gagagacatg ctgttcaatg 420
 accccgaaca cgggtocagaa tcatctctct atagacaggt tctcttggct ctagaacaga 480
 cagactcttg ccaatttgaa gttcagtttg aaataacaca caatgcaatc cactcttgga 540
 ctggaggaga tactccatat ggaatgtcat cactggaata tacagcatat gatccactct 600
 ttatctcca cactcccaac actgatcgta tctgggccat ctggcaggca ctccagaaat 660
 acagaggttt tcaatacaac gcagctcatt gcgatatcca ggttctgaaa caactcttta 720
 aaccattcag cagatccagg aatccaaacc cagtcaccag agccaattct agggcagctg 780
 attcatttga ttatgagaga ctcaattatc aatatgacac acctaccctc accgagctt 840
 ctatctcaga actgatgccc atgcttcaag agagaaagaa ggaagagaga acatttgcag 900
 ccttctctgt gcaaggattt ggcgcacagt tctgatgttt ttgtgatgtc tgacacactg 960
 atggtcattg tgcttctgtc ggaaccttgc cggtaacttg tggggagctt gagatgccct 1020
 ggtcctttga aagattgttc cgtttacgata tcacaaggct tctcaagcag atgaactctc 1080
 actatgattc tgagttccac tttgagttga agattgttgg cacagatgga acagaaactgc 1140
 catggatgag tacaagagc cctaccattg aacaccatgg agga g 1185

<210> 63
 <211> 422
 <212> PRT
 <213> Haliotis tuberculata

<220>
 <221> SIGNAL
 <222> (1) .. (15)

<400> 63
 Leu Val Gln Phe Leu Leu Val Ala Leu Val Val Gly Ala Gly Ala Asp
 1 5 10 15
 Asn Val Val Arg Lys Asp Val Ser His Leu Thr Asp Asp Glu Val Gln
 20 25 30
 Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro Leu
 35 40 45
 Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys Asp
 50 55 60
 Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser Phe
 65 70 75 80
 Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu Leu
 85 90 95
 Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln Thr
 100 105 110
 Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp Ser
 115 120 125
 Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile Ala
 130 135 140
 Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe Glu
 145 150 155 160
 Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu Asp
 165 170 175
 Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu Leu
 180 185 190
 Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr Ser
 195 200 205
 Met Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu His
 210 215 220
 His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln Glu
 225 230 235 240
 Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu Ala
 245 250 255
 His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln Leu
 260 265 270

Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln Leu
 275 280 285
 Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu Gln
 290 295 300
 Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe Ala
 305 310 315 320
 Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val Tyr
 325 330 335
 Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu Lys
 340 345 350
 Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp Arg
 355 360 365
 Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His Leu
 370 375 380
 Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe Ser
 385 390 395 400
 Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr Val
 405 410 415
 Ala Tyr Arg Pro Gly Lys
 420

<210> 64
 <211> 511
 <212> PRT
 <213> Haliotis tuberculata

<400> 64
 Val His Arg Gly Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
 1 5 10 15
 Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
 20 25 30
 Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
 35 40 45
 Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
 50 55 60
 Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
 65 70 75 80
 Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
 85 90 95
 Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
 100 105 110
 Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125

Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Val Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Gln Tyr Ser Met Ser Thr Leu Glu His
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285
 Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
 290 295 300
 Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
 305 310 315 320
 Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
 325 330 335
 Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
 340 345 350
 Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
 355 360 365
 Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
 370 375 380
 Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
 385 390 395 400
 Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
 405 410 415
 Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
 420 425 430
 Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
 435 440 445

Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
450 455 460

Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
465 470 475 480

Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
485 490 495

Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
500 505 510

<210> 65

<211> 197

<212> PRT

<213> *Haliotis tuberculata*

<400> 65

Gly Leu Pro Tyr Trp Asp Trp Thr Gln His Leu Thr Gln Leu Pro Asp
1 5 10 15

Leu Val Ser Asp Pro Leu Phe Val Asp Pro Glu Gly Gly Lys Ala His
20 25 30

Asp Asn Ala Trp Tyr Arg Gly Asn Ile Lys Phe Glu Asn Lys Lys Thr
35 40 45

Ala Arg Ala Val Asp Asp Arg Leu Phe Glu Lys Val Gly Pro Gly Glu
50 55 60

Asn Thr Arg Leu Phe Glu Gly Ile Leu Asp Ala Leu Glu Gln Asp Glu
65 70 75 80

Phe Cys Asn Phe Glu Ile Gln Phe Glu Leu Ala His Asn Ala Ile His
85 90 95

Tyr Leu Val Gly Arg His Thr Tyr Ser Met Ser His Leu Glu Tyr
100 105 110

Thr Ser Tyr Asp Pro Leu Phe Phe Leu His His Ser Asn Pro Asp Arg
115 120 125

Ile Phe Ala Ile Trp Glu Arg Leu Gln Val Leu Arg Gly Lys Asp Pro
130 135 140

Asn Thr Ala Asp Cys Ala His Asn Leu Ile His Glu Pro Met Glu Pro
145 150 155 160

Phe Arg Arg His Glu Pro Met Glu Pro Phe Arg Arg Asp Ser Asn Pro
165 170 175

Leu Asp Leu Thr Arg Glu Asn Ser Lys Pro Ile Asp Ser Phe Asp Tyr
180 185 190

Ala His Leu Gly Tyr
195

<210> 66
 <211> 415
 <212> PRT
 <213> Haliotis tuberculata

<400> 66
 Val Thr Glu Ala Pro Ala Pro Ser Ser Asp Ala His Leu Ala Val Arg
 1 5 10 15
 Lys Asp Ile Asn His Leu Thr Arg Glu Glu Val Tyr Glu Leu Arg Arg
 20 25 30
 Ala Met Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr Gln Ala
 35 40 45
 Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Phe Pro Glu Ala
 50 55 60
 Thr Asn Arg Phe Ala Cys Cys Ile His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg
 85 90 95
 Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala
 100 105 110
 His Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser
 115 120 125
 Gly Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu
 130 135 140
 Asn Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro
 145 150 155 160
 Leu Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe
 165 170 175
 Glu Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His
 180 185 190
 Asn Asn Ile His Ala Trp Ile Gly Gly Gly Glu Lys Tyr Ser Met Ser
 195 200 205
 Ser Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu Arg His Ser
 210 215 220
 Asn Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg
 225 230 235 240
 Asn Arg Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro
 245 250 255
 Leu Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr
 260 265 270
 Tyr Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu
 275 280 285

Gly Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln
290 295 300

Leu Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala
305 310 315 320

Gly Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile
325 330 335

Ile Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu
340 345 350

Gly Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr
355 360 365

Glu Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Val
370 375 380

Phe Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser
385 390 395 400

Ser Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
405 410 415

<210> 67

<211> 414

<212> PRT

<213> Haliotis tuberculata

<400> 67

Gly His His Gln Ala Asp Glu Tyr Asp Glu Val Val Thr Ala Ala Ser
1 5 10 15

His Ile Arg Lys Asn Leu Lys Asp Leu Ser Lys Gly Glu Val Glu Ser
20 25 30

Leu Arg Ser Ala Phe Leu Gln Leu Gln Asn Asp Gly Val Tyr Glu Asn
35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Asp Asp Asn Gly Arg
50 55 60

Lys Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
65 70 75 80

Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
85 90 95

Ala Val Ser Val Pro Tyr Trp Asp Trp Thr Glu Thr Phe Thr Glu Leu
100 105 110

Pro Ser Leu Ile Ala Glu Ala Thr Tyr Phe Asn Ser Arg Gln Gln Thr
115 120 125

Phe Asp Pro Asn Pro Phe Phe Arg Gly Lys Ile Ser Phe Glu Asn Ala
130 135 140

Val Thr Thr Arg Asp Pro Gln Pro Glu Leu Tyr Val Asn Arg Tyr Tyr
145 150 155 160

Tyr Gln Asn Val Met Leu Val Phe Glu Gln Asp Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Met Val His Asn Val Leu His Ala Trp Leu Gly
 180 185 190
 Gly Arg Ala Thr Tyr Ser Ile Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Ile Asn Leu Met Arg Lys Pro Leu His Pro Phe Asp Asn Ser
 245 250 255
 Asp Leu Asn His Asp Pro Val Thr Phe Lys Tyr Ser Lys Pro Thr Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn Asn Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe Asn His Phe Ser Ile Pro Arg Leu Glu Glu Ile Ile Arg Ile Arg
 290 295 300
 Gln Arg Gln Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Thr Val Glu Ile Phe Val Cys Val Pro Thr Thr Ser Gly
 325 330 335
 Glu Gln Asn Cys Glu Asn Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Ala Phe His Phe Asp Arg Leu Tyr Arg Phe Asp Ile
 355 360 365
 Ser Glu Thr Leu Arg Asp Leu Gly Ile Gln Leu Asp Ser His Asp Phe
 370 375 380
 Asp Leu Ser Ile Lys Ile Gln Gly Val Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400
 His Ile Leu Pro Glu Pro Ser Leu Ile Phe Val Pro Gly Ser
 405 410

<210> 68

<211> 419

<212> PRT

<213> *Haliotis tuberculata*

<400> 68

Ser Ser Phe Leu Arg Pro Asp Gly His Ser Asp Asp Ile Leu Val Arg
 1 5 10 15

Lys Glu Val Asn Ser Leu Thr Thr Arg Glu Thr Ala Ser Leu Ile His
 20 25 30

Ala Leu Lys Ser Met Gln Glu Asp His Ser Pro Asp Gly Phe Gln Ala
35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala
50 55 60

Ala His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ala Leu Arg Arg His
85 90 95

Gly Ala Thr Val Gly Val Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser
100 105 110

His Leu Pro Glu Leu Val Thr Met Glu Thr Tyr His Asp Ile Trp Ser
115 120 125

Asn Arg Asp Phe Pro Asn Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu
130 135 140

Gly Glu Asn Ile Thr Thr Glu Arg Glu Val Ile Ala Asp Lys Leu Phe
145 150 155 160

Val Lys Gly Gly His Val Phe Asp Lys Leu Val Leu Gln Thr Ser His
165 170 175

Pro Ser Ala Glu Gln Glu Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu
180 185 190

Ile Leu His Asn Gly Val His Thr Trp Val Gly Gly Ser Arg Thr Tyr
195 200 205

Ser Ile Gly His Leu His Tyr Ala Phe Tyr Asp Pro Leu Phe Tyr Leu
210 215 220

His His Phe Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln
225 230 235 240

Glu Gln Arg Gly Leu Ser Gly Asp Glu Ala His Cys Ala Leu Glu Gln
245 250 255

Met Arg Glu Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Trp
260 265 270

Asn Gln Leu Thr Gln Asp Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr
275 280 285

Arg Lys Phe Gly Tyr Glu Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser
290 295 300

Val Ala Glu Leu Asp Gln Tyr Ile Ile Glu His Gln Glu Asn Asp Arg
305 310 315 320

Val Phe Ala Gly Phe Leu Leu Ser Gly Phe Gly Gly Ser Ala Ser Val
325 330 335

Asn Phe Gln Val Cys Arg Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr
340 345 350

Phe Thr Val Leu Gly Gly Ser Ala Glu Met Ala Trp Ala Phe Asp Arg
355 360 365

Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Glu Lys Met His Leu Arg
370 375 380

Tyr Asp Asp Asp Phe Thr Ile Ser Val Ser Leu Thr Ala Asn Asn Gly
385 390 395 400

Thr Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln
405 410 415

Arg Gly His

<210> 69

<211> 378

<212> PRT

<213> Megathura crenulata

<400> 69

Arg Tyr Gln Ala Thr Ala Glu Tyr His Gly Leu Pro Ala Arg Cys Pro
1 5 10 15

Arg Pro Asp Ala Lys Asp Arg Tyr Ala Cys Cys Val His Gly Met Pro
20 25 30

Ile Phe Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala
35 40 45

Leu Val Gly Arg Gly Ala Thr Ile Gly Ile Pro Tyr Trp Asp Trp Thr
50 55 60

Glu Pro Met Thr His Ile Pro Gly Leu Ala Gly Asn Lys Thr Tyr Val
65 70 75 80

Asp Ser His Gly Ala Ser His Thr Asn Pro Phe His Ser Ser Val Ile
85 90 95

Ala Phe Glu Glu Asn Ala Pro His Thr Lys Arg Gln Ile Asp Gln Arg
100 105 110

Leu Phe Lys Pro Ala Thr Phe Gly His His Thr Asp Leu Phe Asn Gln
115 120 125

Ile Leu Tyr Ala Phe Glu Gln Glu Asp Tyr Cys Asp Phe Glu Val Gln
130 135 140

Phe Glu Ile Thr His Asn Thr Ile His Ala Trp Thr Gly Gly Ser Glu
145 150 155 160

His Phe Ser Met Ser Ser Leu His Tyr Thr Ala Phe Asp Pro Leu Phe
165 170 175

Tyr Phe His His Ser Asn Val Asp Arg Leu Trp Ala Val Trp Gln Ala
180 185 190

Leu Gln Met Arg Arg His Lys Pro Tyr Arg Ala His Cys Ala Ile Ser
195 200 205

Leu Glu His Met His Leu Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn
210 215 220

Asn Asn Glu Lys Thr His Ala Asn Ala Met Pro Asn Lys Ile Tyr Asp
225 230 235 240

Tyr Glu Asn Val Leu His Tyr Thr Tyr Glu Asp Leu Thr Phe Gly Gly
245 250 255

Ile Ser Leu Glu Asn Ile Glu Lys Met Ile His Glu Asn Gln Gln Glu
260 265 270

Asp Arg Ile Tyr Ala Gly Phe Leu Leu Ala Gly Ile Arg Thr Ser Ala
275 280 285

Asn Val Asp Ile Phe Ile Lys Thr Thr Asp Ser Val Gln His Lys Ala
290 295 300

Gly Thr Phe Ala Val Leu Gly Gly Ser Lys Glu Met Lys Trp Gly Phe
305 310 315 320

Asp Arg Val Phe Lys Phe Asp Ile Thr His Val Leu Lys Asp Leu Asp
325 330 335

Leu Thr Ala Asp Gly Asp Phe Glu Val Thr Val Asp Ile Thr Glu Val
340 345 350

Asp Gly Thr Lys Leu Ala Ser Ser Leu Ile Pro His Ala Ser Val Ile
355 360 365

Arg Glu His Ala Arg Gly Lys Leu Asn Arg
370 375

<210> 70

<211> 419

<212> PRT

<213> Megathura crenulata

<400> 70

Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile Arg
1 5 10 15

Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val Lys
20 25 30

Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln Ala
35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala Ala
50 55 60

Ser Lys Arg Phe Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys His
85 90 95

Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg Ser
100 105 110

Glu Leu Pro Glu Leu Leu Thr Val Ser Thr Ile His Asp Pro Glu Thr
 115 120 125
 Gly Arg Asp Ile Pro Asn Pro Phe Ile Gly Ser Lys Ile Glu Phe Glu
 130 135 140
 Gly Glu Asn Val His Thr Lys Arg Asp Ile Asn Arg Asp Arg Leu Phe
 145 150 155 160
 Gln Gly Ser Thr Lys Thr His His Asn Trp Phe Ile Glu Gln Ala Leu
 165 170 175
 Leu Ala Leu Glu Gln Thr Asn Tyr Cys Asp Phe Glu Val Gln Phe Glu
 180 185 190
 Ile Met His Asn Gly Val His Thr Trp Val Gly Gly Lys Glu Pro Tyr
 195 200 205
 Gly Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile
 210 215 220
 His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln
 225 230 235 240
 Arg Phe Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Val Asn Leu
 245 250 255
 Met Lys Thr Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Leu
 260 265 270
 Asn Asp His Thr His Asp Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr
 275 280 285
 Gln Lys Phe Gly Tyr Ile Tyr Asp Thr Leu Glu Phe Ala Gly Trp Ser
 290 295 300
 Ile Arg Gly Ile Asp His Ile Val Arg Asn Arg Gln Glu His Ser Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Glu Gly Phe Gly Thr Ser Ala Thr Val
 325 330 335
 Asp Phe Gln Val Cys Arg Thr Ala Gly Asp Cys Glu Asp Ala Gly Tyr
 340 345 350
 Phe Thr Val Leu Gly Gly Glu Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365
 Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Asp Lys Met Asn Leu Arg
 370 375 380
 His Asp Glu Ile Phe Gln Ile Glu Val Thr Ile Thr Ser Tyr Asp Gly
 385 390 395 400
 Thr Val Leu Asp Ser Gly Leu Ile Pro Thr Pro Ser Ile Ile Tyr Asp
 405 410 415
 Pro Ala His

<210> 71
 <211> 418
 <212> PRT
 <213> Megathura crenulata

<400> 71
 His Asp Ile Ser Ser His His Leu Ser Leu Asn Lys Val Arg His Asp
 1 5 10 15
 Leu Ser Thr Leu Ser Glu Arg Asp Ile Gly Ser Leu Lys Tyr Ala Leu
 20 25 30
 Ser Ser Leu Gln Ala Asp Thr Ser Ala Asp Gly Phe Ala Ala Ile Ala
 35 40 45
 Ser Phe His Gly Leu Pro Ala Lys Cys Asn Asp Ser His Asn Asn Glu
 50 55 60
 Val Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro His Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Phe Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95
 Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile His Asn Ile Pro
 100 105 110
 His Leu Phe Thr Asp Lys Glu Tyr Tyr Asp Val Trp Arg Asn Lys Val
 115 120 125
 Met Pro Asn Pro Phe Ala Arg Gly Tyr Val Pro Ser His Asp Thr Tyr
 130 135 140
 Thr Val Arg Asp Val Gln Glu Gly Leu Phe His Leu Thr Ser Thr Gly
 145 150 155 160
 Glu His Ser Ala Leu Leu Asn Gln Ala Leu Leu Ala Leu Glu Gln His
 165 170 175
 Asp Tyr Cys Asp Phe Ala Val Gln Phe Glu Val Met His Asn Thr Ile
 180 185 190
 His Tyr Leu Val Gly Gly Pro Gln Val Tyr Ser Leu Ser Ser Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Val Trp Ala Val Trp Gln Ala Leu Gln Glu Lys Arg Gly Leu Pro
 225 230 235 240
 Ser Asp Arg Ala Asp Cys Ala Val Ser Leu Met Thr Gln Asn Met Arg
 245 250 255
 Pro Phe His Tyr Glu Ile Asn His Asn Gln Phe Thr Lys Lys His Ala
 260 265 270
 Val Pro Asn Asp Val Phe Lys Tyr Glu Leu Leu Gly Tyr Arg Tyr Asp
 275 280 285

Asn Leu Glu Ile Gly Gly Met Asn Leu His Glu Ile Glu Lys Glu Ile
290 295 300

Lys Asp Lys Gln His His Val Arg Val Phe Ala Gly Phe Leu Leu His
305 310 315 320

Gly Ile Arg Thr Ser Ala Asp Val Gln Phe Gln Ile Cys Lys Thr Ser
325 330 335

Glu Asp Cys His His Gly Gly Gln Ile Phe Val Leu Gly Gly Thr Lys
340 345 350

Glu Met Ala Trp Ala Tyr Asn Arg Leu Phe Lys Tyr Asp Ile Thr His
355 360 365

Ala Leu His Asp Ala His Ile Thr Pro Glu Asp Val Phe His Pro Ser
370 375 380

Glu Pro Phe Phe Ile Lys Val Ser Val Thr Ala Val Asn Gly Thr Val
385 390 395 400

Leu Pro Ala Ser Ile Leu His Ala Pro Thr Ile Ile Tyr Glu Pro Gly
405 410 415

Leu Gly

<210> 72

<211> 241

<212> PRT

<213> Megathura crenulata

<400> 72

Asp His His Glu Asp His His Ser Ser Ser Met Ala Gly His Gly Val
1 5 10 15

Arg Lys Glu Ile Asn Thr Leu Thr Thr Ala Glu Val Asp Asn Leu Lys
20 25 30

Asp Ala Met Arg Ala Val Met Ala Asp His Gly Pro Asn Gly Tyr Gln
35 40 45

Ala Ile Ala Ala Phe His Gly Asn Pro Pro Met Cys Pro Met Pro Asp
50 55 60

Gly Lys Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
65 70 75 80

Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Leu Thr Ala His
85 90 95

Gly Ala Arg Val Gly Leu Pro Tyr Trp Asp Gly Thr Thr Ala Phe Thr
100 105 110

Ala Leu Pro Thr Phe Val Thr Asp Glu Glu Asp Asn Pro Phe His His
115 120 125

Gly His Ile Asp Tyr Leu Gly Val Asp Thr Thr Arg Ser Pro Arg Asp
130 135 140

Lys Leu Phe Asn Asp Pro Glu Arg Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Gln Phe Glu Val
 165 170 175
 Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly Leu
 180 185 190
 Thr Pro Tyr Gly Met Ser Thr Leu Glu Tyr Thr Thr Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ala Asn Thr Asp Arg Ile Trp Ala Ile Trp Gln
 210 215 220
 Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asp His Ala Asn Cys Glu
 225 230 235 240
 Ile

<210> 73
 <211> 98
 <212> PRT
 <213> Megathura crenulata

<400> 73
 Lys His His Glu Lys His His Glu Asp His His Glu Asp Ile Leu Val
 1 5 10 15
 Arg Lys Asn Ile His Ser Leu Ser His His Glu Ala Glu Glu Leu Arg
 20 25 30
 Asp Ala Leu Tyr Lys Leu Gln Asn Asp Glu Ser His Gly Gly Tyr Glu
 35 40 45
 His Ile Ala Gly Phe His Gly Tyr Pro Asn Leu Cys Pro Glu Lys Gly
 50 55 60
 Asp Glu Lys Tyr Pro Cys Cys Val His Gly Met Ser Ile Phe Pro His
 65 70 75 80
 Trp His Arg Leu His Thr Ile Gln Leu Glu Arg Ala Leu Lys Lys His
 85 90 95
 Gly Ser

<210> 74
 <211> 314
 <212> PRT
 <213> Megathura crenulata

<400> 74
 Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
 1 5 10 15
 Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
 20 25 30

Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
 35 40 45
 Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
 50 55 60
 His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
 65 70 75 80
 Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
 85 90 95
 Ala Trp Val Gly Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
 100 105 110
 Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
 115 120 125
 Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
 130 135 140
 Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
 145 150 155 160
 Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
 165 170 175
 Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
 180 185 190
 Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Glu Tyr
 195 200 205
 Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
 210 215 220
 Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
 225 230 235 240
 Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
 245 250 255
 Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
 260 265 270
 Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
 275 280 285
 Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
 290 295 300
 Ile Pro Pro Pro Ala Ile Ile Phe Glu Arg
 305 310

<210> 75
 <211> 416
 <212> PRT
 <213> Megathura crenulata

<400> 75
 Ala Asp Ala Lys Asp Phe Gly His Ser Arg Lys Ile Arg Lys Ala Val
 1 5 10 15
 Asp Ser Leu Thr Val Glu Glu Gln Thr Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Asp Asp Lys Thr Ser Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Glu Lys Lys
 50 55 60
 Phe Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Phe Thr
 85 90 95
 Gly Gly Leu Pro Tyr Trp Asp Trp Thr Arg Ser Met Ser Ala Leu Pro
 100 105 110
 His Phe Val Ala Asp Pro Thr Tyr Asn Asp Ala Ile Ser Ser Gln Glu
 115 120 125
 Glu Asp Asn Pro Trp His His Gly His Ile Asp Ser Val Gly His Asp
 130 135 140
 Thr Thr Arg Asp Val Arg Asp Asp Leu Tyr Gln Ser Pro Gly Phe Gly
 145 150 155 160
 His Tyr Thr Asp Ile Ala Lys Gln Val Leu Leu Ala Phe Glu Gln Asp
 165 170 175
 Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Asn Glu Pro Tyr Ser Met Ser Ser Leu Arg
 195 200 205
 Tyr Thr Thr Tyr Asp Pro Ile Phe Phe Leu His Arg Ser Asn Thr Asp
 210 215 220
 Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Asp Ser Val Ile Asn Pro Asp Asp Glu Thr Arg Glu
 260 265 270
 His Ser Val Pro Phe Arg Val Phe Asp Tyr Lys Asn Asn Phe Asp Tyr
 275 280 285

Glu Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp
290 295 300

Arg Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
305 310 315 320

Leu Leu His Glu Ile Gly Gln Ser Ala Leu Val Lys Phe Tyr Val Cys
325 330 335

Lys His Asn Val Ser Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile
340 345 350

Leu Gly Asp Glu Ala Glu Met Pro Trp Arg Tyr Asp Arg Val Tyr Lys
355 360 365

Tyr Glu Ile Thr Gln Gln Leu His Asp Leu Asp Leu His Val Gly Asp
370 375 380

Asn Phe Phe Leu Lys Tyr Glu Ala Phe Asp Leu Asn Gly Gly Ser Leu
385 390 395 400

Gly Gly Ser Ile Phe Ser Gln Pro Ser Val Ile Phe Glu Pro Ala Ala
405 410 415

<210> 76

<211> 419

<212> PRT

<213> Megathura crenulata

<400> 76

Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
1 5 10 15

His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
20 25 30

Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
50 55 60

Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
65 70 75 80

Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
85 90 95

Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Glu Lys Ala Asp Ser Leu
100 105 110

Pro Ser Leu Ile Asn Asp Ala Thr Tyr Phe Asn Ser Arg Ser Gln Thr
115 120 125

Phe Asp Pro Asn Pro Phe Phe Arg Gly His Ile Ala Phe Glu Asn Ala
130 135 140

Val Thr Ser Arg Asp Pro Gln Pro Glu Leu Trp Asp Asn Lys Asp Phe
145 150 155 160
Tyr Glu Asn Val Met Leu Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
165 170 175
Glu Ile Gln Leu Glu Leu Ile His Asn Ala Leu His Ser Arg Leu Gly
180 185 190
Gly Arg Ala Lys Tyr Ser Leu Ser Ser Leu Asp Tyr Thr Ala Phe Asp
195 200 205
Pro Val Phe Phe Leu His His Ala Asn Val Asp Arg Ile Trp Ala Ile
210 215 220
Trp Gln Asp Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
225 230 235 240
Cys Ala Val Asn Glu Met Arg Lys Pro Leu Gln Pro Phe Asn Asn Pro
245 250 255
Glu Leu Asn Ser Asp Ser Met Thr Leu Lys His Asn Leu Pro Gln Asp
260 265 270
Ser Phe Asp Tyr Gln Asn Arg Phe Arg Tyr Gln Tyr Asp Asn Leu Gln
275 280 285
Phe Asn His Phe Ser Ile Gln Lys Leu Asp Gln Thr Ile Gln Ala Arg
290 295 300
Lys Gln His Asp Arg Val Phe Ala Gly Phe Ile Leu His Asn Ile Gly
305 310 315 320
Thr Ser Ala Val Val Asp Ile Tyr Ile Cys Val Glu Gln Gly Gly Glu
325 330 335
Gln Asn Cys Lys Thr Lys Ala Gly Ser Phe Thr Ile Leu Gly Gly Glu
340 345 350
Thr Glu Met Pro Phe His Phe Asp Arg Leu Tyr Lys Phe Asp Ile Thr
355 360 365
Ser Ala Leu His Lys Leu Gly Val Pro Leu Asp Gly His Gly Phe Asp
370 375 380
Ile Lys Val Asp Val Arg Ala Val Asn Gly Ser His Leu Asp Gln His
385 390 395 400
Ile Leu Asn Glu Pro Ser Leu Leu Phe Val Pro Gly Glu Arg Lys Asn
405 410 415
Ile Tyr Tyr

<210> 77
 <211> 413
 <212> PRT
 <213> Megathura crenulata

<400> 77
 Asp Gly Leu Ser Gln His Asn Leu Val Arg Lys Glu Val Ser Ser Leu
 1 5 10 15
 Thr Thr Leu Glu Lys His Phe Leu Arg Lys Ala Leu Lys Asn Met Gln
 20 25 30
 Ala Asp Asp Ser Pro Asp Gly Tyr Gln Ala Ile Ala Ser Phe His Ala
 35 40 45
 Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Ala His Arg His Ala Cys
 50 55 60
 Cys Leu His Gly Met Ala Thr Phe Pro Gln Trp His Arg Leu Tyr Thr
 65 70 75 80
 Val Gln Phe Glu Asp Ser Leu Lys Arg His Gly Ser Ile Val Gly Leu
 85 90 95
 Pro Tyr Trp Asp Trp Leu Lys Pro Gln Ser Ala Leu Pro Asp Leu Val
 100 105 110
 Thr Gln Glu Thr Tyr Glu His Leu Phe Ser His Lys Thr Phe Pro Asn
 115 120 125
 Pro Phe Leu Lys Ala Asn Ile Glu Phe Glu Gly Glu Gly Val Thr Thr
 130 135 140
 Glu Arg Asp Val Asp Ala Glu His Leu Phe Ala Lys Gly Asn Leu Val
 145 150 155 160
 Tyr Asn Asn Trp Phe Cys Asn Gln Ala Leu Tyr Ala Leu Glu Gln Glu
 165 170 175
 Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile Leu His Asn Gly Ile
 180 185 190
 His Ser Trp Val Gly Gly Ser Lys Thr His Ser Ile Gly His Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile His His Ser Gln Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Glu His Arg Gly Leu Ser
 225 230 235 240
 Gly Lys Glu Ala His Cys Ala Leu Glu Gln Met Lys Asp Pro Leu Lys
 245 250 255
 Pro Phe Ser Phe Gly Ser Pro Tyr Asn Leu Asn Lys Arg Thr Gln Glu
 260 265 270
 Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr His Arg Phe Gly Tyr Glu
 275 280 285

Tyr Asp Ser Leu Glu Phe Val Gly Met Ser Val Ser Ser Leu His Asn
290 295 300

Tyr Ile Lys Gln Gln Gln Glu Ala Asp Arg Val Phe Ala Gly Phe Leu
305 310 315 320

Leu Lys Gly Phe Gly Gln Ser Ala Ser Val Ser Phe Asp Ile Cys Arg
325 330 335

Pro Asp Gln Ser Cys Gln Glu Ala Gly Tyr Phe Ser Val Leu Gly Gly
340 345 350

Ser Ser Glu Met Pro Trp Gln Phe Asp Arg Leu Tyr Lys Tyr Asp Ile
355 360 365

Thr Lys Thr Leu Lys Asp Met Lys Leu Arg Tyr Asp Asp Thr Phe Thr
370 375 380

Ile Lys Val His Ile Lys Asp Ile Ala Gly Ala Glu Leu Asp Ser Asp
385 390 395 400

Leu Ile Pro Thr Pro Ser Val Leu Leu Glu Gly Lys
405 410

<210> 78

<211> 417

<212> PRT

<213> Megathura crenulata

<400> 78

His Gly Ile Asn Val Arg His Val Gly Arg Asn Arg Ile Arg Met Glu
1 5 10 15

Leu Ser Glu Leu Thr Glu Arg Asp Leu Ala Ser Leu Lys Ser Ala Met
20 25 30

Arg Ser Leu Gln Ala Asp Asp Gly Val Asn Gly Tyr Gln Ala Ile Ala
35 40 45

Ser Phe His Gly Leu Pro Ala Ser Cys His Asp Asp Glu Gly His Glu
50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Val Phe Pro His Trp His Arg
65 70 75 80

Leu Tyr Thr Leu Gln Met Asp Met Ala Leu Ser His Gly Ser Ala
85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Lys Leu Pro
100 105 110

Asp Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp Arg Asp Ala Val
115 120 125

Val Asn Asn Pro Phe Ala Lys Gly Tyr Ile Lys Ser Glu Asp Ala Tyr
130 135 140

Thr Val Arg Asp Pro Gln Asp Ile Leu Tyr His Leu Gln Asp Glu Thr
145 150 155 160

Gly Thr Ser Val Leu Leu Asp Gln Thr Leu Leu Ala Leu Glu Gln Thr
 165 170 175
 Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Val Val His Asn Ala Ile
 180 185 190
 His Tyr Leu Val Gly Gly Arg Gln Val Tyr Ala Leu Ser Ser Gln His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Ala Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Ile Trp Ala Val Trp Gln Ala Leu Gln Lys Lys Arg Lys Arg Pro
 225 230 235 240
 Tyr His Lys Ala Asp Cys Ala Leu Asn Met Met Thr Lys Pro Met Arg
 245 250 255
 Pro Phe Ala His Asp Phe Asn His Asn Gly Phe Thr Lys Met His Ala
 260 265 270
 Val Pro Asn Thr Leu Phe Asp Phe Gln Asp Leu Phe Tyr Thr Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ala Gly Met Asn Val Asn Gln Leu Glu Ala Glu Ile
 290 295 300
 Asn Arg Arg Lys Ser Gln Thr Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320
 Gly Ile Gly Arg Ser Ala Asp Val Arg Phe Trp Ile Cys Lys Thr Ala
 325 330 335
 Asp Asp Cys His Ala Ser Gly Met Ile Phe Ile Leu Gly Gly Ser Lys
 340 345 350
 Glu Met His Trp Ala Tyr Asp Arg Asn Phe Lys Tyr Asp Ile Thr Gln
 355 360 365
 Ala Leu Lys Ala Gln Ser Ile His Pro Glu Asp Val Phe Asp Thr Asp
 370 375 380
 Ala Pro Phe Phe Ile Lys Val Glu Val His Gly Val Asn Lys Thr Ala
 385 390 395 400
 Leu Pro Ser Ser Ala Ile Pro Ala Pro Thr Ile Ile Tyr Ser Ala Gly
 405 410 415

Glu

<210> 79
 <211> 395
 <212> PRT
 <213> Megathura crenulata

<220>
 <221> misc_feature
 <222> (55)..(55)

<223> "Xaa" is any naturally-occurring amino acid residue including Pro, Leu, His and Arg

<400> 79

Asp	His	Ile	Ala	Gly	Ser	Gly	Val	Arg	Lys	Asp	Val	Thr	Ser	Leu	Thr	1	5	10	15
Ala	Ser	Glu	Ile	Glu	Asn	Leu	Arg	His	Ala	Leu	Gln	Ser	Val	Met	Asp	20	25	30	
Asp	Asp	Gly	Pro	Asn	Gly	Phe	Gln	Ala	Ile	Ala	Ala	Tyr	His	Gly	Ser	35	40	45	
Pro	Pro	Met	Cys	His	Met	Xaa	Asp	Gly	Arg	Asp	Val	Ala	Cys	Cys	Thr	50	55	60	
His	Gly	Met	Ala	Ser	Phe	Pro	His	Trp	His	Arg	Leu	Phe	Val	Lys	Gln	65	70	75	
Met	Glu	Asp	Ala	Leu	Ala	Ala	His	Gly	Ala	His	Ile	Gly	Ile	Pro	Tyr	85	90	95	
Trp	Asp	Trp	Thr	Ser	Ala	Phe	Ser	His	Leu	Pro	Ala	Leu	Val	Thr	Asp	100	105	110	
His	Glu	His	Asn	Pro	Phe	His	His	Gly	His	Ile	Ala	His	Arg	Asn	Val	115	120	125	
Asp	Thr	Ser	Arg	Ser	Pro	Arg	Asp	Met	Leu	Phe	Asn	Asp	Pro	Glu	His	130	135	140	
Gly	Ser	Glu	Ser	Phe	Phe	Tyr	Arg	Gln	Val	Leu	Leu	Ala	Leu	Glu	Gln	145	150	155	
Thr	Asp	Phe	Cys	Gln	Phe	Glu	Val	Gln	Phe	Glu	Ile	Thr	His	Asn	Ala	165	170	175	
Ile	His	Ser	Trp	Thr	Gly	Gly	His	Thr	Pro	Tyr	Gly	Met	Ser	Ser	Leu	180	185	190	
Glu	Tyr	Thr	Ala	Tyr	Asp	Pro	Leu	Phe	Tyr	Leu	His	His	Ser	Asn	Thr	195	200	205	
Asp	Arg	Ile	Trp	Ala	Ile	Trp	Gln	Ala	Leu	Gln	Lys	Tyr	Arg	Gly	Phe	210	215	220	
Gln	Tyr	Asn	Ala	Ala	His	Cys	Asp	Ile	Gln	Val	Leu	Lys	Gln	Pro	Leu	225	230	235	
Lys	Pro	Phe	Ser	Glu	Ser	Arg	Asn	Pro	Asn	Pro	Val	Thr	Arg	Ala	Asn	245	250	255	
Ser	Arg	Ala	Val	Asp	Ser	Phe	Asp	Tyr	Glu	Arg	Leu	Asn	Tyr	Gln	Tyr	260	265	270	
Asp	Thr	Leu	Thr	Phe	His	Gly	His	Ser	Ile	Ser	Glu	Leu	Asp	Ala	Met	275	280	285	
Leu	Gln	Glu	Arg	Lys	Lys	Glu	Glu	Arg	Thr	Phe	Ala	Ala	Phe	Leu	Leu	290	295	300	

His Gly Phe Gly Ala Ser Ala Asp Val Ser Phe Asp Val Cys Thr Pro
305 310 315 320

Asp Gly His Cys Ala Phe Ala Gly Thr Phe Ala Val Leu Gly Gly Glu
325 330 335

Leu Glu Met Pro Trp Ser Phe Glu Arg Leu Phe Arg Tyr Asp Ile Thr
340 345 350

Lys Val Leu Lys Gln Met Asn Leu His Tyr Asp Ser Glu Phe His Phe
355 360 365

Glu Leu Lys Ile Val Gly Thr Asp Gly Thr Glu Leu Pro Ser Asp Arg
370 375 380

Ile Lys Ser Pro Thr Ile Glu His His Gly Gly
385 390 395

<210> 80

<211> 1266

<212> DNA

<213> *Haliotis tuberculata*

<400> 80

cttggtcagt ttctactcgt cgccttctgt gtgggggctg gaggacagaa cgtcgtcaga 60
aaggacgtga gtacacctac ggatgacgag gtgcaagctc tccacggcgc cctccatgac 120
gtcactgcat ctacagggcc tctgagtttc gaagacataa catcttaccac tgccgcacca 180
cgctcgtgtg actacaaggg acggaagatc gctcgtctgt tccacgggtc gctccagttc 240
cccttctggc acagggcata tctcgtccaa gccagcggg cactgttgtc caaacgggaag 300
actgtcggaa tgccttactg ggaactggag caaacgctga ctcactacc atctcttgtg 360
actgaaccca tctacattga cagtaaaagt ggaagggctc aaaccaacta ctggtaccgc 420
ggcgagatag cgttcatcaa taagaagact gcgcgagctg tagatgatcg cctattccag 480
aagggtggagc ctgggtcacta cacacatctt atggagactg tctctgacgc tctcgaaacag 540
gacgaattct gtaaaattga aatccagttc gaggttggctc ataagtctat ccattacttg 600
gttgggcgga aatttgaata ttcaatgtca aacttggaa acacctccta cgaccccatc 660
ttcttctccc accactccaa cgttgaccgc ctcttcgccca tctggcagcg tcttcaggaa 720
ctcgaggaaa agaattccaa tgcaatggac tgtgcacatg aactcgtc caagcaactc 780
caacccttca acagggcagc caatccagtc cagctcacia aggaccactc gacacctgct 840
gacctctttg attacaacaa acttggatag agctacgaca gcttaaacct gaatggaatg 900
acgcagaaac agctgaaaac agaactagac gaacgccact ccaaaagacg tgcgtttgca 960
agcttccgac tgcaggtctt tgggggttct gccaacgttg ttgtctatgc atgtgtccct 1020
gatgatgac cagcagatga tgactactgc gagaaagcag gcgacttctt cattcttggg 1080
ggtcaaaagg aaatgcctgt gagattctac agacctctct tctatgatgt aactgaagcg 1140
gtacatcacc ttggagctcc gctaagtggc cactactatg tgaaaaacaga actcttcagc 1200
gtgaattggca cagcactttc acctgatctt ctctctcaac caactgttgc ctaccgacct 1260
gggaaa 1266

<210> 81

<211> 1257

<212> DNA

<213> *Haliotis tuberculata*

<400> 81

ggtcacacttg acccacctgt gcatcatcgc cagcatgacg atcttattgt tcgaaaaaat 60
atagatcatt tgactcgtga agaggaaatc gagctaagga tggctctgga gagattccag 120
gccgacacat cgtgtgatgg gtaccaggct acagtagagt accatggcct tctgtctcgt 180
tgtccacgac cagatgcaaa agtcagggtc gcctgttgta tgcatggcat ggcacctctc 240
cctcactggc accggctgtt cgttaccagg gtggaagatg ctctgtacg cgtggaatgc 300

cctatcggtg ttcccttattg ggactggaca aaacctatga ctcaccttcc agacttggca 360
tcaaatgaga cgtacgtaga ccgctatgga catacacatc ataactcatt cttcaatgca 420
aatatatctt ttgaggaggg acaccatcac acgagcagga tgatagattc gaaactgttt 480
gccccagctg cttttgggga gcatcccatc ctgtttgatg gaactcctga cgcatttgag 540
caggaagattc tttgcgactt tgagattcag ttgtagttag tccataatc tattcatgag 600
tggataggcg gtccgaaga ttactccatg gccaccttgc attacacagc ctttgacccc 660
attttctacc ttcatcattc caatgtcgat cgtctatggg caatctggca agctcttcaa 720
atcaggagac acaagccata tcaagcccac tgtgcacagt ctgtggaca gttgccaatg 780
aagccatttg ttttcccatc acctcttaac aacaacgaga agacacatag tcaattcagtc 840
ccgactgata ctttatgata cgaggaaagt gctgcactca gctacgatga tctaactgtt 900
ggtggatgga accttgaaga aatagaagaa gctatatact tcagacaaca gcatgaca 960
gtctctcgag gttttctcct tgcctggaata ggaacatctc cactttgtga cttttcata 1020
aataaacccg ggaaccaacc actcaaaagt ggagatattg ccaattcttg tgggtccaag 1080
gaaatgcctt gggcgcttga ccgcttgat aaggtcgaaa taactgactc attgaagaca 1140
ctttctctcg atgtcgatgg agattatgaa gtcactttta aaattcatga tatgcacgga 1200
aacgctcttg atacggacct gattccacac gcagcagttg tttctgagcc agctcac 1257

<210> 82

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 82

cctacccttg aggatgaaaa gcacagctta cgaatcagaa aaaatgtcga cagcttgact 60
cctgaagaaa caaatgaact gcgtaaagcc ctggagcttc ttgaaaatga tcaactcga 120
ggtggattca atcagcttgg cgccttccat ggagagccta aatggtgcc taactcgtga 180
gcggagcaca aggttgcagt ctgtgttcat ggcattggct ttttccctca ttggcacagg 240
cttctgtctc tccaggcgga gaatgctctt agaaagcatg ggtacagtgg tgccttacca 300
tactgggatt ggaactgcgc cctttcccaa ctctctgata tggttagtca tgacagat 360
acagatctct ccgaccatca cgtgaagcat tcaatggcca ctogataca 420
gtaaatcagg ataccacagg aagcgtacgg gaggatcttt atcaacaacc tgaatttgg 480
catttcacgg atattcgtca acaagtcctc tttagcttag aacaagatga ctctgttgc 540
tttgaagtgc agtatgagat ttcccataat tttatccatg cactttagag aggaaccgac 600
gctttggcca tggcatcgct gagatataca gcatacgatc caatcttttt cttgcactc 660
tcaaacaccg acaggatctg ggctatttgg caatccctgc aaaaatacag agggcaaacg 720
tacaacactg ccaactgcgc catagaatct atgagaaggc ccttgcaacc ttgtggata 780
agcagtgcca ttaaccctga cagaatcacc agagagcatg ctatcccggt ttagtctctc 840
aaactatagag ataacttcca ttacgtatat gataccctgg aatttaatgg tttgtcgatt 900
tcacaacttg atagagagct ggaaaaaatc aagagtacac aaagagtatt tgcgtgattc 960
ttgctgtcgg ggataaaaa atctgctctt gtgaaattcg aagtttgcac tccactgagt 1020
aattgtcata aagcagggga gttttatcta ctcggggacg aaaaacgagat ggttggggcc 1080
tatgacccag ttttcaagta tgatattact caggttctgg aagcaaacca tctacacttc 1140
tatgatctc tttcattcg ctacgaagtc ttgtacttta aaggagtgaag tttgggaact 1200
gacctgttcc aactgcgaaa tgtgtacat gattccggca ca 1242

<210> 83

<211> 1239

<212> DNA

<213> *Haliotis tuberculata*

<400> 83

ggcaccctg atcgtgataa ctacgttgaa gaagtactg gggccagtc tatcaggaag 60
aatttgaacg acctcaatc cggagaaatg gaaagccta gagctgctt cctgcatttt 120
caggagcagc gaacatatga atctattgcc cagtaccatg gcaaacaggc caaatgtcaa 180
ttgatgatc ataatattgc gtgttgtgbc catggtatgc ctactctccc ccagtgccac 240
agactgtatg tggttcaggt ggagaatgct cctctaacca ggggactcgg tgtggctgtt 300
ccttactggg agtggactcg tcccatagac catctacact atttcattga tgatgcaaca 360
tacttcaatt ccgacaaca cgggtacgac cctaaccctt tcttcagggg aaagggtact 420
tttgaaaacg cagtgcacac aagggaacca caagccggcg tcttcaactc agattatagt 480
tatgagaatg ttttacttgc actgagcag gaaaattatt gtgactttga aattcagttt 540
gagctgttgc ataacgcact tcattccatg ctggaggata aagggcagta ctccatgtcc 600

tccctggact	attctgcgtt	tgtatccgtc	tcttctctac	atcatgccaa	cacggacaga	660
ctgtgggcaa	tctggcagga	actacaaga	tctccgagaac	tgctttatga	agaagcggaac	720
tgtgcaatca	acctcatgca	tcaaccactg	aagccgttca	gtgatccaca	tgagaatcac	780
gacaatgtca	ctttgaaata	ctcaaaacca	caggacggat	tcgactacca	gaaccacttc	840
ggatacaagt	atgacaacat	tgagttccat	cacttatcta	tcccaagctt	tgatgctacc	900
ctgaagcaaa	ggagaaatca	cgacagagtg	tttgcgggct	tcctttctca	taacatagga	960
acttctgctg	acataaactat	ctacatatgt	ctgcctgacg	gacggcgctgg	caatgactgc	1020
agtcgatgag	cgggaacatt	ctatatcttc	ggaggcgaaa	cagagatgcc	ttttatcttt	1080
gacgctttgt	ataaatttga	aatcaccaaa	ccactgcaac	agtaggaggt	caagctgcat	1140
ggtggagttt	tcgaactgtt	gcttgagatc	aaggcataca	acggttccta	tctggatccc	1200
cataccctttg	atccaactat	catctttgaa	cctggaaca			1239

<210> 84

<211> 1260

<212> DNA

<213> *Haliotis tuberculata*

<400> 84

gatacccata	tcttgaccac	cgaccatgag	gaagagatac	ttgtcaggaa	gaatataatt	60
gatttgagcc	caaggagagc	ggtttctcta	gtcaaaagctt	tgcaaaagaa	gaagaatgat	120
cgtccgcgtg	atgggtaccac	agccattgcc	tctttccatg	ccctgccacc	actctgtccc	180
aatccatctg	cagctcaacc	ttatgcttgc	tggttccatg	gcatggctac	atttcccacc	240
tgccacagac	tgtacactgt	tcaggttcag	gatgccctga	ggagacatgg	ttcacttggt	300
ggttattcct	actggagact	gacaaaacca	gtcaacaggt	tacccgagct	tctttcttca	360
gcaacatttt	atcatccaat	ccggaattat	aatatttcaa	atccattcct	cgggctgcac	420
atagaatttg	aaggaccggg	cgttcatata	gagaggcaca	taaaactaga	gcgcctgttt	480
cacagtgggg	atcatgacgg	ataccacaac	tggttctctg	aaactgtctc	cttctgtctg	540
gaacaggaag	attactgcga	ttttgaaata	caatttgaga	tagcccataa	tgccatccac	600
acatggattg	gtggaaagcg	agtatatggc	atgggacacc	ttcactatgc	atcatatgat	660
ccaattttct	acatccacca	ttcacagacg	gacagaatat	gggctatttg	gcaagagctg	720
cagaagtaca	gggggtctatc	tggttcggaa	gcaaaactgt	ccattgaaca	tatgagaaca	780
cccttgaagc	ctttcagctt	tgggccaccc	tacaatttga	atagtctaac	gcaagaatat	840
tcaaaagctc	aggacacggt	tgactataag	aagtttggag	acagatatga	tagtctggaa	900
ttggaggggc	gatcaatttc	tcgcattgat	gaacttatcc	agcagagaca	ggagaaagac	960
agaaactttg	cagggttctct	ccttaaaagt	tttggtacat	ccgcattctg	gtcattgcaa	1020
gtttgcagag	ttgatccacac	ctgtaaagat	gcgggctatt	tcactattct	gggaggatca	1080
gccgaatagc	catgggcatt	cgacaggctt	tataagtatg	acattactaa	aactctttac	1140
gacatgaacc	tgaggcacga	ggacactttc	tctatagacg	taactatcac	gtcttcacat	1200
ggaaacagtac	tctcgggaga	cctcattcag	acgcctcca	ttatatcttg	acctggagcg	1260

<210> 85

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 85

cataaaactca	actcacggaa	acatacacct	aacagagatcc	gccatgagct	aagtagcctt	60
agttcccggt	acatagcaag	cttgaaaggca	gctttgacaa	gccttcaaca	tgataatggg	120
actgatgggt	atcaagctat	tgtctgccttc	catggcgcttc	ctgcgcagtg	ccacgagcca	180
tcttcacgtg	agatcgctgt	ttgcatccac	ggcatggcga	cggttctcta	ctggcaccgg	240
ttgtacactc	tcaggtttgga	gcaagcgctg	cgcagacacg	gggtccagtg	tgctgttcca	300
tactggagct	ggaccagacc	aatcacggaa	ctgccacaca	ttctgacaga	cgyagaatat	360
tatgacgttt	ggcaaaatgc	cgctctggcc	aatccgcttg	caagaggtta	tgtgaaat	420
aaagatgcac	ttacgggtga	aaatgtccag	gaaagtctgt	tcaaaatgtc	aagttttga	480
aagcactcgc	tctgttttga	ccaggctttg	ttggctcttg	aacaaactga	ctactgtgac	540
ttcgaagttc	agtttgaagt	gatgcataac	acgatccatt	atctcgtagg	agggcgctca	600
acgtacgcct	tctcctctct	cgagtattcc	tcatacgcac	caatctctct	tattcacacc	660
tcgttttgatg	acaaaatatg	ggctgtatgg	caagaactgc	aaagcaggag	acatctacag	720
tttagaacac	ctgattgtgc	tgtgggcctc	atggggtcag	caatgaggcc	tttcaacaag	780
gatttcaacc	acaactcgtt	caccaagaag	cacgcagctc	ctaatacagt	atttgattat	840
gaagatcttg	gctataacta	tgacaacctt	gaaatcagtg	gtttaaactt	aaatgagatc	900

gaggcggttaa tagcaaaacg caagtcacat gctagagtct ttgctggggt cctgtgtgtt 960
 ggattaggaa cttcggctga tatacatctg gaaatttgca agacatcgga aaactgccat 1020
 gatgcgtggg tgatttttcat ccttggaggt tctgcagaga tgcattgggc atacaaccgc 1080
 ctctacaagt atgacatcac agaagcattg caggaaattg acatcaacc tgaagatgtt 1140
 ttccatcgct atgaacctt ttctctgagg ctgtcgggtg ttgctgtgaa tggaaactgtc 1200
 attccatcgt ctcatcttca ccagccaacg ataactctat aaccaggcga a 1251

<210> 86

<211> 1209

<212> DNA

<213> *Haliotis tuberculata*

<400> 86

gatacccatg acgaccatca gtcgggaagc atagcaggat ccgggggtccg caaggacgtg 60
 aacaccttga ctaaggctga gaccgacaac ctgaggagg cgctgtgggg tgtcatggca 120
 gaccacggtc ccaatggctt tcaagctatt gctgctttcc atggaaaacc agcttttgtt 180
 cccatgcctg atggccacaa ctactcatgt tgtactcacg gcatggctac ctccccacac 240
 tggcatcgcc tctacaccaa gcagatggag gatgcaatga gggcgcatgg gtctcatgtc 300
 ggctcgcctt actgggactg gactgctgcc ttaccaccac tgccaacact ggtaaccgac 360
 acgggacaaca accccttcca acatggacac attgattatc tcaatgtcag cacaactcga 420
 tctccccgag acatgctgtt caacgacccc gagcatggat cagagtgcgt ctctacaga 480
 caagtctctt tagctctgga acaaaactgat ttctgcaaat tcgaagtcca gtttagata 540
 accacaatg coactcattc ctggacaggt ggccacagcc cctacgggaat gtccactctc 600
 gacttcaact cactcagatcc tctcttctgg ctccaccact ccaaacccga cagaatctgg 660
 gctgtctggc aagcttttga agaatacaga ggacttccat acaaccatgc caattgtgag 720
 atccaggcaa tgaaaacgcc cctgaggcct ttcagtgcag atataacca caaccagtc 780
 acaaaaggta accggaagcc attagatgtg ttcgagtata atcggttgag ctccacgtac 840
 gacaacctca tcttccattg atacagtatt ccggaacttg atcgcgtgct tgaagaaaga 900
 aaggagggag acagaataatt tgcctgcctt ctctcagtg gaatacaagc tagtctgat 960
 tgaagtgtg acatatgccca gccagaacac ttcgacaggac ttcgacaggac ttttgcgatt 1020
 ttgggagggg agctagaaat gccctggctc ttcgacagac tgttccgcta tgatatcacc 1080
 aaggtgatga agcagctaca cctgaggcat gactctgact ttaccttcag gttgaaagatt 1140
 gtcggcacgc acgaccacga gcttcttca gacagtgtca aagcaccaac tattgaattt 1200
 gaaccgggc 1209

<210> 87

<211> 1536

<212> DNA

<213> *Haliotis tuberculata*

<400> 87

gtgcacagag gcggaacca cgaagatgaa caccatgatg acagactcgc agatgtcctg 60
 atcaggaaga aagttgactt cctctccctg caagaggcca acgcaattaa ggatgcactg 120
 tacaagctcc agaatacgca cagtaaaagg ggctttgagg ccatagctgg ctatcacggg 180
 cctcttaata tgtgtccaga aaagaggtaac gacaagatc cctgtctgtg ccacgggaatg 240
 ccgctgttcc ccacttgcca ccgctgcgat accattcaga tggagagagc tctgaaaaac 300
 catggctctc caatggggcat tcttactggt gattggacaa agaagatgtc gagtcttcca 360
 tcttcttctg gaatttccag caacaacacac ctttctaca aatattacat ccggggcgtg 420
 cagcacgaaa caaccaggga cattaatcag agactcttta atcaaaccaa gtttggtgaa 480
 tttgattacc tatattacct aactctgcaa tctcggagg aaaactcgta ctgtgacttt 540
 gaagttcagt atgagatcct ccataacgcc gtccactcct ggcttggagg aactggaaa 600
 tatttccatg ctaccctgga gcattcggcc tttagacctg tctcatgat taccactcgc 660
 agtttggata gaattcggat cctttggcag aagttgcmaa agataagaat gaagccttac 720
 tacgcatctg attgtctggc cgacagactt atgaaagacc ccttgcaccc cttcaactac 780
 gaaaccgtta atgaagatga attcaccgcc atcaactctt tcccaagcat actgtttgac 840
 cactacaggt tcaactatga atacgataac atgagaatca ggggtcagga catatcatga 900
 ctgaaagagg taattcagga ataaagaac aaagatcgca tatttgcctg ttttgtttgt 960
 tcgggctaac ggaattcagc tacagtgaat gtaattcatt attcgaaaaa cgcatacaagt 1020
 caggaagaaat atgcaggaga atttgcagtt ttggggaggt agaagagagat gggttgggca 1080
 tatgaaagaa tgctgaaatt ggacatctcc gatgctgtac acaagcttca cgtgaaagat 1140
 gaagacatcc gttttagagt ggttgttact gcctacaacg gtgacgttgt taccaccagg 1200

ctgtctcagc	cattcatcgt	ccaccgtcca	gcccatgtgg	ctcacgacat	cttggaatac	1260
ccagttagtg	cgggccatga	ccttcgcgct	aaagtctgtg	taaagagcgg	caccaaaatc	1320
gagttttacac	caatagattc	gtcgggtgaac	aaagcaatgg	tgagatctggg	cagctatact	1380
gctatgggcta	aatgcattgt	tccccctttc	tcttaccacg	gctttgaact	ggacaaatgc	1440
tacacgctga	atcacggtga	ctactacatt	gtcgcaggta	cccacgcgtt	gtgtgagcag	1500
aacctcaggc	tccacatcca	cgtggaacac	gagtag			1536

<210> 88

<211> 591

<212> DNA

<213> *Haliotis tuberculata*

<400> 88

gggtctccgt	actgggactg	gacgcagcat	ctgactcaac	tcccagatct	gggtgcagac	60
cccttgtttg	tcgacccgga	aggaggaaag	gcccatgaca	acgcattgta	tcgtggaaac	120
atcaagtttg	agaataagaa	gactgcaaga	gctgttgacg	atcgcttttt	cgagaaggtt	180
ggaccaggag	agaatacccg	actctttgaa	ggaattctcg	atgctcttga	acaggatgaa	240
ttctgcgaact	tcgagatcca	gtttgagttg	gctcacacg	ctatccacta	cctgggtggc	300
ggcgcgtaca	cgtactccat	gtctcatctc	gagtagaacct	cctacgaccc	cctcttcttc	360
ctccatccat	ccaaaccgga	ccgcattctc	gccattctgg	accgtcttca	ggactctcaga	420
ggaaaggacc	ccaaacggcc	cgactgcgca	cacacactca	tccattgacc	catggaaccg	480
ttccgtcggc	atgagcccat	ggaaccgttc	cgtcgggact	cgaaccctct	tgacctcacc	540
agggaaaaat	ccaaaccaat	tgacagcttt	gattatgccc	accttggcta	c	591

<210> 89

<211> 1245

<212> DNA

<213> *Haliotis tuberculata*

<400> 89

gttacagagg	ccccagctcc	ctcctcggat	gctcacctcg	ccgtcaggaa	ggatatcaac	60
catctgacac	gcgaggagggt	gtacgagctg	cgcagagcta	tgagagattt	ccaggccgac	120
acatccggtg	atgggtacca	ggctacgggt	gagtagacag	gcttacctcg	tcgagtgtcca	180
ttccccaggg	ccaaaaatga	gttcgcctgt	tgcatccacg	gcattggcagc	attccctcat	240
tgccacagac	tggtctgtcac	ccagggtggaa	gatgctctga	tcaggcgagg	atcgctcata	300
gggggtcccc	actgggactg	gactcagcct	atggcgcatc	tcccaggact	tcgacacaaac	360
gccacctata	gagatcccat	cagcggggac	agcagacaca	acccttcca	cgatgttgaa	420
gttgcccttg	aaaatggacg	tacagaacgt	caccocagata	gtagatttgt	tgaacaaacct	480
ttatttggca	aacataacgc	tctcttcgac	agtagatgtc	atgcttttga	gcaggaggac	540
ttctgcgatt	tgtaagttca	atttgagatg	accataata	atatccacgc	ctggatttgtt	600
ggcggcgaga	agtattccat	gtctctctca	cactacacag	ccttcgaccc	tatctctcac	660
cttgcgtcat	ccaaacactga	ccggctcttg	gcaatttggc	aagcgttgca	gatacgaaga	720
aaacaggcct	acaaaggctca	ttgtgcttgg	tctgaggaa	gccagcctct	caaacctttc	780
gccttcagtt	ccccactgaa	caacaacgaa	aaaacctacg	aaaactcgtg	gcccaccaac	840
gtttacgact	acgaaggagt	ccttggctat	acttatgatg	acctcaactt	cgggggcgat	900
gacctgggtc	agcttgaggga	atacatccag	aggcagagac	agagagacag	gacctttgct	960
gggtttcttc	tgtccacatat	tggtacatca	gcgaattgtt	aaatcattat	agaccatggg	1020
actcttcata	ctctcgtggg	cacgttttgt	gttcttggcg	gagagaaggga	gatgaaatgg	1080
ggatttgacc	gtttgtacaa	atatgagatt	acagatgaac	tgagggaact	taatctccgt	1140
cgtagtgatg	ttttcagcat	ctctgtttaa	gtactatgat	ttgatgtcag	tgagctgtcc	1200
tctgaaactca	tcccatctgc	tgctatcatc	ttogaacgaa	gccat		1245

<210> 90

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 90

attgaccatc	aggaccgca	tcatgacaca	atcattagga	aaaatgttga	taatcttaca	60
cccaggagaa	ttattctctc	gaggcgggca	atggcagacc	ttcaatcaga	caaaaccgcc	120
ggtggattcc	agcaaatgtc	tgcttttcac	ggggaaccca	aatggtgcc	aagtcocgat	180

gctgagaaga	agttctcctg	ctgtgtccat	ggaatggctg	tcttccctca	ctggcacaga	240
ctcctgaccg	tgcaaggcga	gaatgcctcg	agaaagcatg	gatgtctcgg	agctctcccc	300
tactgggaact	ggactcggcc	cctgtctcac	ctacctgatt	tgggttttgg	aagttagcaga	360
actacaccga	tgcccatattc	caccgtggaa	gcccgaaacc	cctggtagacg	cggccatatt	420
actacagctg	gtgttgacac	aacaagaagc	gtccgtcaa	aactgtctga	agctcctgga	480
tttgccatt	atactggggg	cgctaaagcaa	gtgcttctgg	ctttggagca	ggaatgacttc	540
tgtgattttg	aagtcacagt	tgagatagct	cacaatttca	ttcacgctct	tgtcggcgga	600
agcgagccat	atgggatggc	gtcactccgt	tacactactt	atgatccaat	ttctacactc	660
catcatttca	acactgcagc	actctgggct	atatggcagg	ctctacaaaa	gtacaggggg	720
aaaccttaaca	attccgcgca	ctgcgcccatt	gcctctatga	gaaaacccct	acaacccctt	780
ggcttgactg	atgagatcaa	cccggatgat	gagacaagac	accatgtcgt	tcctttcagt	840
gtcttttgatt	acaagaacaa	cttcaattat	gaatatgaca	cccttgactt	caacgggacta	900
tcaatctccc	agctggaccg	tgaaactgtca	cggagaaagt	ctcatgacag	agtatttgcc	960
ggatttttgc	tgcatgtgat	tcagcagctc	gcactagtta	aattctttgt	ctgcaaatca	1020
gatgatgact	gtgaccacta	tgctgggtgaa	ttctacatcc	ttgggtgatg	agctgaaatg	1080
ccatggggct	atgatcgtct	ttacaaaat	gagatcaact	agcagctcaa	tgccctggat	1140
ctacacatcg	gagatagatt	cttcacaga	tacgaagcgt	ttgatcttca	tggtacaagt	1200
cttggaagca	acatcttccc	caaaccttct	gtcacatcatg	acgaaggggg	a	1251

<210> 91

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 91

ggtcaccatc	aggctgacga	gtacgacgaa	gttgtaactg	ctgcaagcca	catcagaaaag	60
aattttaaaag	atctgtcaaa	gggagaagta	gagagcctaa	ggctcgcctt	cctgcaactt	120
cagaacgacg	gagctctatg	gaatatgtgc	aagttccacg	gcaagcctgg	gtgtgtgtgat	180
gatacggctc	gcaaggtttgc	ctgttgtgtc	catggaatgc	ccaccttccc	ccagtggcac	240
aggctctatg	tcctccaggt	ggagaatgct	ttgtctggaga	gaggatctgc	cgctctctgtg	300
ccatactggg	actggactga	aacatttaca	gagctgccaat	cttttgatgc	tgaggctacc	360
tatttcaatt	cccgctcaaca	aacgtttgac	cttaactcctt	ttctcagagg	taaaatcagt	420
tttgagaagt	ctgtttacaac	acgtgatccc	cagcctgagc	tgtacgttaa	caggttactac	480
taccaaaacg	tcattgttgg	ttttgaacag	gacaaactact	gcgaactctga	gatacagttt	540
gagatggttc	acaatgttct	ccatgctctg	cttgggtggaa	gagctactta	ttctatttct	600
ttctttgatt	attctgcatt	cgaccctgtg	tttttctctc	accatgcgaa	cacagataga	660
ttgtggggcca	tctggcagga	gctgcagagg	tacaggaaga	agccatacaa	tgaagcggat	720
tgtgcattta	acctaatgcg	caaacctcta	catcctctcg	acaacagtga	ttctaatcat	780
gatcctgttaa	cccttaataa	ctcaaaaccc	actgatggct	ttgactacca	gaacaactctt	840
ggatacaagt	atgacaacct	tgagttcaat	catttccagta	ttcccaggct	tgaagaaatc	900
attcgttatg	gacaacgtca	agatcgtgtg	tttgacaggat	ttctcttcca	caacatttggg	960
acatccgcaa	ctgttgagat	attcgtctgt	gtccctacca	ccagcgggtga	gcaaaactgt	1020
gaaaacaaag	ccggaacatt	tgccgtactc	cagagatggc	catgagatgc	gtttcatttt	1080
gacagactct	acaggtttga	catcagtgaa	acaactgagg	acctcgccat	acagctggac	1140
agccatgatc	ttgacctcag	catcaagatt	caaggagtaa	attggactcta	ccttgatcca	1200
cacatccctgc	cagagccatc	cttgattttt	gtgcctgtgt	ca		1242

<210> 92

<211> 1257

<212> DNA

<213> *Haliotis tuberculata*

<400> 92

agttctcttcc	tgccgtcctga	tgggcattca	gatgacatcc	ttgtgagaaa	agaagtgaac	60
agcctgacaa	ccaggagagac	tgcatctctg	atccatctctc	tgaagagtat	gcagggaagac	120
cattcacctcg	acgggtttcca	agccattgccc	tctttccactg	ctctgccacc	actctgcctt	180
tcacacatct	cagctcacccg	ttatgcttgc	ttgttccacg	gcatgggctac	atttccccac	240
tgccacagat	tgtacactgt	acagttccag	gatgcactga	ggagacatgg	agctacagga	300
gggtacacgt	attgggattg	gctgcgacgc	cagctctacc	taccagagct	tgtaacatgt	360
gagacatacc	atgatatttg	gagtaacaga	gatttcccca	atcctttcta	ccaagccaat	420
attgagtttg	aaggagaaaa	cattacaaca	gagagagaag	tcattgcaga	caaacctttt	480

gtcaaaggtg	gacacgtttt	tgataaaactg	gttcttcaaa	caagccatcc	tagcgctgag	540
caggaaaaact	actgtgactt	tgagattcag	tttgaatttc	ttcacaacgg	cgttcacacg	600
tgggtcgag	gcagctgtac	ctactctatc	ggacatcttc	attacgcatt	ctacgacctt	660
cttttctacc	ttccactatt	ccagacagac	cgtatttggg	caatctggca	agaactccag	720
gaacagagag	ggctctcggt	tgatgaggct	ctagtggttc	tcgagcaaat	gagagaacca	780
ttgaagcctt	tcagcttcgg	cgctccttat	aactggaaac	agctcacaca	ggatttctcc	840
cgacccgagg	acaccttcga	ctacaggaag	tttggttatg	aatatgacaa	tttagaattc	900
ctgggaattg	cagttgtcga	actggatcaa	tacattattg	aacatcaaga	aaatgataga	960
tgattcgtg	ggttcctgtt	gagttggatc	ggagggttcg	catcagttaa	tttccaggtt	1020
gttagagctg	attccacatg	tcaggatgct	gggtacttca	ccgtttcttg	tggcagtgct	1080
gagatggcgt	gggactttga	caggctttac	aaatatgaca	ttactgaaac	cttggagaaa	1140
atgcaccttc	tgactgtaga	tgacttcaca	atctctcgca	gtctgacgcg	caacaacgga	1200
actgtcctga	gcagcagttc	aatcccaaca	ccgagtgta	tattccagcg	gggacat	1257

<210> 93

<211> 1248

<212> DNA

<213> *Haliotis tuberculata*

<400> 93

ctgacataaa	ataccaggag	catgtcaccg	aaccgtgttc	gccgtgagct	gagcgatctg	60
tctcgcgagg	acctgtctag	tctcaagtct	gctctgcgag	acctacaggga	ggatgatggc	120
gcaaacagct	accaggctct	tgacgccttc	ctcagggctac	cagcagcgctg	ccatgatagc	180
cggggaaatg	agatcgcatg	ttgcattcac	gggatgcgga	ccttccccca	gtggcacaga	240
ctgtacaccc	tcgagttggg	gatggctctg	aggagacatg	gatcactctg	cgccatcccc	300
tactgggact	ggacaaagcc	tatctccgaa	ctccccctgc	tcttccaccg	ccctgagtat	360
tatgacccat	ggcatgatgc	tgtggtaaac	aaccattctt	ccaaaggttt	tgtaaaattt	420
gcaaatacct	acacagtaag	agacccacag	gagatgctgt	tccagctttg	tgaacatgga	480
gagtcacatc	tctatgagca	aactcttctt	gctcttgagc	aaacgcgacta	ctgtgatatt	540
gaggtacagt	ttgagttcct	ccataacgtg	atccactacc	ttgttgggtg	acgtcagacc	600
tacgcatctg	cttctcttga	ttatgctctc	tacgaccat	tcttctttat	acaccattcc	660
tttgtggata	agatgtgggt	agtatggcaa	gctcttcaaa	agaggaggaa	acttccatac	720
aagcgagctg	actgtgctgt	caacctaatg	actaaaccaa	tgaggccatt	tgactccgat	780
atgaatcaga	acccattcac	aaagatgcac	gcagttccca	acacactcta	tgactacagc	840
acactgtact	acagctacga	taattctcgaa	ataggtggca	ggaatctcga	ccagcttcag	900
gctgaaattg	acagaagcag	aagccacgat	cgcgtttttg	ctggattctt	gcttcgttga	960
atcggaactt	ctgctgatgt	caggttttgg	atttgtagaa	atgaaaatga	ctgccacagg	1020
gggtgaaataa	ttttcatctt	aggtggagcc	aaggaaatgc	catggctcatt	tgacagaaac	1080
ttcaagtttg	atatcaccca	tgtactcgag	aatgctggca	ttagcccaga	ggacgtgttt	1140
gatgctgagg	agccatttta	tatcaagggt	gagatccatg	ctgttaacaa	gaccattgata	1200
cgctgctctg	tgatcccgag	cccaactatc	atctattctc	ctggggaa		1248

<210> 94

<211> 1206

<212> DNA

<213> *Haliotis tuberculata*

<400> 94

ggtcgcgctg	ctgacagtgc	gcactctgcc	aacatttctg	gctctggggg	gaggaaggac	60
gtcacgaccc	tcactgtgtc	tgagaccgag	aacctaaagc	aggctcttca	aggtgtcatc	120
gatgatactg	gtcccaattg	ttaccaagca	atagactcct	tccacgggaag	tcttccaatg	180
tgcgagatga	acggcgcgca	ggttgcctgt	tgtctcacg	gtatggcctc	cttccacac	240
tgccacagac	tgtatgtgaa	cgagatggaa	gatgcctctg	ctgaccacgg	gtcacatatc	300
ggcatccctt	actgggactg	gacaaactgc	ttcacagagt	taccgcctct	tgtcacagac	360
tccgagaaca	atcccttcca	tgagggtcgc	attgatcatc	tcggtgtaac	caegtacagt	420
tcctccagag	acatgtctgt	taacgaccca	gagcaaggat	cagagtctgt	cttctataga	480
caagtctctc	ttgcttttga	gcagactgac	tatgccagat	tcgaagtcca	gitttgatga	540
accacacaag	ccattcaact	ctggacaggt	ggacgtagcc	cttacggaat	gtcgaccctc	600
gagttcacag	cctacagcat	tctcttctgt	cttccacctc	ccaacaccca	cagaatctgg	660
gctgtctggc	aagcactgca	gaaataccga	ggaactccat	acaacgaagc	acactgtgaa	720
atccagggtc	tgaaacagcc	cttgaggcca	ttcaacgatg	acatcaacca	caatccaatc	780

```

accaagacta atgccaggcc tatcgattca ttgtattatg agagggttaa ctatcagtat 840
gacaccctta gcttccatgg taagagcatc cctgaaactga atgacctgct cgaggaaaaga 900
aaaagagaag agagaacatt tgctgccttc cttcttcgtg gaatcggttg cagtgtgcat 960
ctgcgtcttt acatctgcgg gcccaatgggt gactgtgtct ttgcaggaaac ctttgcgtgtg 1020
gtgggagggg agctagaaat gccttgggtcc ttgcagacag gtgtccgccta tgacatcacc 1080
agagtcatga atcagctcca tctccagtat gattcagatt tcatgtttcag ggtgaagctt 1140
gtggccacca atggcactga gctttcatca gacctttcca agtcaccaac aattgaacat 1200
gaactt 1206

```

```

<210> 95
<211> 1548
<212> DNA
<213> Haliotis tuberculata

<220>
<221> misc_feature
<222> (1275)..(1275)
<223> "n" is a, g, c, or t, including c or t

```

```

<400> 95
ggagccacca gaggaccagt tgaagaaaca gaagtcactc gccaacatac tgacggcaat 60
gcacactctt atcgtaagga agttgattcg ctgtccctgg atgaagcaaa caacttgaag 120
aatgcccctt acaagctaca gaacgaccac agtctaacgg gatacgaagc aatctctggt 180
taccatggat accccaatct gtgtccggaa gaaggcgatg acaaaatacc cctgctgcgt 240
ccccggatgg gcatctttcc ttactggcac agactcttga ccattcaact ggaagagact 300
cttgagccaca atgtggcact gcttgggtgt ccttactggg actggaacaa ggacctgtcg 360
tcactgcggg cgttcttctc cgactccagc aacaacaatc cctacttcaa gtaccacatc 420
gcgggtgtgt gtcacgacac cgtcagagag ccaactagtc ttatatataa ccagcccaaa 480
atccatggtt atgattatct ctattaccta gcattgacca cgcctgaaga aaacaattac 540
tgggactctt aggttcagta tgagatcctc cacaacgcgc tccactcctg gcttggagga 600
tcccagaagt attccatgtc taccctggag tattcggcct ttgacctgt ctttatgatc 660
cttcaactcg gtctagacag actttggatc atctggcaag aacttcagaa gatcaggaga 720
aagccctaca acttcgcata atgtgtctat catatgatgg aagagccact ggcgcctctc 780
agctatccat ctatcaacca ggacgagttc acccgtggca actccaagcc tttcacagtt 840
tttgacagcc ataagttcgg ctaccattac gataaactga atgttagagg tcacagcatc 900
caagaactca acacaatcat caatgacttg agaaaacacag acagaatcta cgcagagatt 960
gtttgtcag gcactcggtac gtctgctagt gtcaagatct atctccgaac agatgacaat 1020
gacgaagaag ttggaacttt catgtcctg ggaggagaga gggaaatgcc atgggcctac 1080
gagcgagttt tcaagtatga catcacagag gttgcagata gacttaaaat taagtattgg 1140
ggacaccctt taacttccgg aactggagat cacatcctta cgaatggaat cggttggtaaa 1200
caagagccta cccaattcct tcatcatctc caatcactgc caatcagatc tgcagtgttc 1260
ttgttatccc agttaggaag aaaccttcac atccctccca aagttgtcgt caagaaagggc 1320
accgcagctg agttccaccc agtcgatgat tcagttacga gaccagttgt tgactctgtt 1380
agctacactg cactcttcaa ctgtgtggta ccaccgttca cataccacgg attcgaaactg 1440
aaccacgtct attctgtcaa gcttgggtgac tactatgtta ctggacccac gagagacctt 1500
tgccagaatg cagatgtcag gattcatatc catgttgagg atgagtaa 1548

```

```

<210> 96
<211> 966
<212> DNA
<213> Megathura crenulata

```

```

<400> 96
ggcctaccgt actgggactg gactgaaccc atgacacaca ttccgggtct ggcaggaaac 60
aaaacttatg tggattctca tgggtgcattc cacacaaatc cttttcatag ttcagtgatt 120
gcatttgaag aaaatgctcc ccacacaaaa agacaaatag atcaaaagact ctttaaaccc 180
gctacctttg gacacacacac agacctgttc aaccagattt tgtatgcctt tgaacaagaa 240
gattactgtg actttgaagt ccaatttgag atattaccata accagatcca cctgtggaca 300
ggaggaagcg aacatttctc aatgtgctcc catacttaca cagcttttga ttctttgtt 360
tactttcacc attctaagct tgatcgtctt tgggcccgtt ggcaagcctt acagatgaga 420
cggcataaac cctacagggc ccactgcgcc atatctctgg aacatatgca tctgaaacca 480

```

ttcgcctttt	catctccctt	taacaataac	gaaaagactc	atgccaatgc	catgccaaac	540
aagatctcag	actatgaaaa	tgtctcccat	tacacatcag	aagatttaac	atttggaggc	600
atctctctgg	aaaacataga	aaagatgac	cacgaaaacc	agcaagaaga	cagaatatat	660
gccgggtttt	tcttggctgg	catactgact	tcagcaaatg	ttgatattct	cattaaaaact	720
accgattccg	tgcaacataa	ggctggaaca	tttgcagtcg	tcggttgaag	caaggaaaac	780
aagtggggat	ttgatcgcgt	tttcaagttt	gacatcacgc	acgttttgaa	agatctcgat	840
ctcactctgt	atgggcatgt	cgaagttaac	gttgacatca	ctgaagtcga	tggaaactaaa	900
cttgcatcca	gtctttattc	acatgcttct	gtcattctgt	agcatgcacg	tggttaagctg	960
aataga						966

<210> 97

<211> 1242

<212> DNA

<213> Megathura crenulata

<400> 97

gttaaaattg	acaaagtgc	aaggagtcgt	cttattcgaa	aaaatgtaga	ccgtttgagc	60
cccaggagga	tgaatgaact	tcgtaaaagc	ctagccttac	tgaagaggga	caaaagtgc	120
gggtggattc	agcagcttgg	tgcatctccat	ggggagccaa	aatgggtgcc	tagtcccga	180
gcattctaaa	aatttgcctg	ctgtgttcac	ggcatgtctg	tggtccctca	ctggcatcga	240
ctgttgacgg	ttcagagtga	aaatgctttg	agacgacatg	gctaagtcgg	agctttgccg	300
tactgggatt	ggactctccc	tcttaatcac	cttcccgaac	tgccagatca	tgagaagtcg	360
gtcgaccctg	aagatggggg	agagaagcat	aaccttgggt	tcgatggctc	tatagataca	420
gtcgacaaaa	caacaacaag	aagtgttcag	aataaactct	tcgaacagcc	tgagtttggt	480
cattataacc	gcattgccaa	acaagtactg	ctagcgttgg	aacaggacaa	ttctctgtac	540
tttgaatacc	aatatgagat	tgcccataaac	tacatccatg	cactttgtagg	agggcgtcag	600
ccttatggta	tggcatcgct	tcgctacact	gcttttgatc	cactatttcta	cttgatcac	660
tctaaatcac	atcgatatag	ggcaatatgg	caggctttac	agaagtacag	agggaaaaccg	720
tacaacgttg	ctaactgtgc	tgttacatcg	atgagagaac	ctttgcaacc	atttggctctc	780
cttgccaata	tcaacacaga	ccatgtaacc	aaggagcatt	cagtgccatt	caacgttttt	840
gattacaaga	ccaatttcaa	ttatgaatat	gacactttgg	aatttaacgg	ctctcacaac	900
tctcagttga	ataaaaagct	cgaagcgata	aagagccaag	acaggttctt	tgccaggtctc	960
ctgtttatctg	gtttcaagaa	atcatctctt	gttaaatcca	atatgtgcac	cgatagcagc	1020
aactgtcacc	ccgctggaga	gttttaacct	ctgggtgatg	aaaacgagat	gccattgggca	1080
tacgatagag	tcttcaaaata	tgacataacc	gaaaaaactc	acgatctaaa	gctgcatgca	1140
gaagaccact	tctacattga	ctatgaagta	tttgactcta	aaccagcaag	cttgggaaaaa	1200
gatttggttca	agcagccttc	agtcattcat	gaaccaagaa	ta		1242

<210> 98

<211> 1236

<212> DNA

<213> Megathura crenulata

<400> 98

ggtcaccatg	aaggcgaaat	atatcaagct	gaagtaactt	ctgccaaacc	tattcgaaaa	60
aaacttgaaa	atctgagcct	tggtgaactc	gaaagtctga	gagctgcctt	ctctgaaatt	120
gaaaacgatg	gaactataga	atcaaatagct	aaattccatg	gtagccctgg	tttctggcag	180
ttaaatggta	accccatctc	ttgtgtgtgc	ctatggcatgc	caactttccc	tcactggcac	240
agactgtacg	tggtgtgctg	tgagaatgcc	ctctctgaaa	aaggatcatt	ctgtagctgtt	300
ccctatttgg	cttggaacaa	acgaatcgaa	catttaacct	acctgatttc	agacgccact	360
tactacaatt	ccaggcaaca	tcaactatgag	acaaacccat	tccatcatgg	caaaatcaca	420
cacgagaatg	aaatcactac	tagggatccc	aaggacagcc	tcttccattc	agactacttt	480
tacgagcagg	tcctttacgc	cttgagcagc	gataaactct	gtgatttcga	gattcagttg	540
gagatattac	acaatgcatt	gcattcttta	cttggtggca	aaggttaata	ttccatgtca	600
aaaccttgatt	acgctgcttt	tgatcctgtg	ttcttccctc	atcacgcaac	gactgacaga	660
atctggggcaa	cttggaacaga	ccttcagagg	ttccgaaaac	ggccataccg	agaagcgaat	720
tgcgctatcc	aattgatgca	cacgcccactc	cagcggcttg	ataagagcga	caacaatgac	780
gaggcaacga	aaacgcattg	cactccacat	gatgggtttg	aatatcaaaa	cagcttttgtt	840
tatgcttacg	ataactctga	actgaatcac	tactcgattc	ctcagcttga	tcacatgctg	900
caagaaagaa	aaaggcatga	cagagtattc	gctggtcttc	tccttcaaaa	tattggaaca	960
tctgccgatg	gccatgtatt	tgatgtcttc	ccaactgggg	aacacacgaa	ggactgcagt	1020

catgaggctg	gtatgttctc	catcttaggc	ggtcaaacgg	agatgtcctt	tgtatttgac	1080
agactttaca	aacttgacat	aactaaagcc	ttgaaaaga	acggtgtgca	cctgcaaggg	1140
gatttcgatac	tggaaattga	gattacggct	gtgaatggat	ctcatctaga	cagtcacgtc	1200
atccactctc	ccactatact	gtttgaggcc	ggaaca			1236

<210> 99
 <211> 1257
 <212> DNA
 <213> Megathura crenulata

<400> 99						
gattctgcgc	acacagatga	tggacacact	gaaccagtga	tgatttcgca	agatatcaca	60
caattggaca	agcgtaacaa	actgtcactg	gtgaaagccc	togagttccat	gaaagccgac	120
cattcatctg	atgggttcca	ggcaatcgct	tccttccatg	ctcttccctcc	tctttgtcca	180
tcaccagctg	cttcaaaagag	gtttgcgtgc	tgctgcatg	gcattggcaac	gttcccaaca	240
tggcaccgtc	tgtacacagt	ccaattccaa	gattctctca	gaaaacatgg	tgcagtcggt	300
ggacttccgt	actgggagctg	gacctacct	cgcttctgaat	taccagagct	cctgaccgctc	360
tcaacttatt	atgaccggga	gacaggcaga	gatataccaa	atccatttat	tggttctaaa	420
atagagtgtg	aaggagaaaa	cgtacatact	aaaagagata	tcaataggga	tgcctctctc	480
cagggatcaa	caaaaaacaa	tcataactgg	tttatgtagc	aagcactgct	tgctcttgaa	540
caaaacaaat	actgcgactt	cgagggtcag	tttgaataa	tgcataatgg	tgttcatacc	600
tgggttggag	gcaaggagcc	ctatggaatt	ggccatctgc	attatgcttc	ctatgatcca	660
cttttctaca	tcctacactc	ccaaactgat	cgattttggg	ctatatggca	atcgttgcag	720
cgtttcagag	tcagtctctg	atctgaggct	aactgtgctg	taaatctcat	gaaaactcct	780
ctgaagcctt	tcagcttttg	agcaccatat	aactttaagt	atcacacgca	tgtattctca	840
aagcctgaag	atacatttga	ctacccaaaag	tttgataaca	tatatgacac	tctggaattt	900
gcagggtggg	caattgtctg	cattgacat	attgtccgta	acaggcagga	acattcaagg	960
gtctttccgc	gattcttctg	tgaaggattt	ggcacctctg	ccaactgtcg	tttccagctc	1020
tgtcgacacg	ggcgagactg	tgaagatgca	gggtacttca	cgctgttggt	aggtgaaaaa	1080
gaaatgcctt	gggcctttga	tggcctttac	aagtacgaca	taacagaaaac	cttagacaag	1140
atgaaccttc	gacatgacga	aactctccag	attgaagtaa	ccattacatc	ctacagtgga	1200
actgtactcg	atagtggcct	tattcccaca	ccgtcaatca	tctatgatcc	tgctcat	1257

<210> 100
 <211> 1254
 <212> DNA
 <213> Megathura crenulata

<400> 100						
catgatatta	gttcgcacca	cctgtcgtcc	aaacagggtc	gtcatgatct	gagtagactg	60
agtgagcgag	atatttgaag	ccttaaatat	gctttgagca	gcttgcaggc	agatacctca	120
gcagatgggt	ttgctgccat	tgcactcctc	catggtctgc	ctgccaagt	taatgacagc	180
cacaataaac	aggtggcatg	ctgtatccat	ggaatgccta	cattccccca	ctggcacaga	240
ctctacaccc	tccaatttga	gcaagctcta	agaagacatg	gctctagtgt	agcagtaacc	300
tactgggaact	ggacaaagcc	aatacataat	attccacatc	tgttccacaga	caaagaatac	360
tacgatgtct	ggagaaataa	agtaaatgcca	aatccatttg	ccgagggtga	tgtcccctca	420
cacgatatac	acacggttag	agacgtccaa	gaaggcctgt	tccactgcac	atcaacgggt	480
gaacactcag	cgctcttgaa	tcaagctcct	tgggcctctg	aacagcacga	ctactgcgat	540
tttgagtcac	agtttgaagt	catgcacaac	acatctcatt	acattagtgg	aggaacctcaa	600
gtctattctt	tgtatccctt	tcattatgct	tcatatgatc	cgactctctt	catcacacca	660
tccttttgag	acaagggttg	ggctgtctcg	caggctcttc	aagaaaaagag	agggcctcca	720
tcagaccgtg	ctgactgcgc	tgttagtctg	atgactcaga	acatgaggcc	tttccattac	780
gaaattaaac	ataaccagtt	caccaagaaa	catgcagttc	caaatgatgt	tttcaagtac	840
gaactcctgg	gttacagata	cgacaactct	gaaatcggtg	gcattgaatt	gcattgaatt	900
gaaaaggaaa	tcaaaagacaa	acagcaccat	gtgagagtgt	ttgcagggtt	cctccttcac	960
ggaattagaa	cctcagctga	tgtccaaatt	cagatttgta	aaacatcaga	agattgtcac	1020
ctaggaggcg	aaactctcgt	tcttgggggg	actaaagaga	tgccctggcg	ttataaccgt	1080
ttatttcaat	acgataattac	ccatgctctt	catgacgcac	acatcactcc	aggaagcgtc	1140
ttccatccgt	ctgaaccatt	cttcatcaag	gtgtcagtga	cagccgtcaa	cggaacaggt	1200
cttcggcgctt	caatcctgca	tgcaccaaac	attatctatg	aacctgggtc	cggt	1254

<210> 101
 <211> 510
 <212> DNA
 <213> *Megathura crenulata*

<400> 101
 gaccatcacg aagatcatca ttcttcttct atggctggac atgggtgtcag aaaggaaatc 60
 aacacactta ccactgcaga ggtggacaat ctcaaaagatg ccattgagacg cgtcatggca 120
 gaccacgggt caaatggata ccaggctata gcagcgcttcc atggaaaccc accaatgtgc 180
 cctatgccag atggaagaaa ttactcgtgt gtgtacacatg gcattggctac ttccccccac 240
 tggcacagac tgtacacaaa acagatggaa gatgccttga ccgcccatgg tgcagagatc 300
 ggcccttctt actgggacgg gacaactgcc ttacagcgtt tgccaacttt tgtcacagat 360
 gaagaggaca atcctttcca tcatgggtcac atagactatt tgggagtgga tacaactcgg 420
 tcgccccgag acaagtgtt caatgatcca gagcggagat cagaatcgtt ctctacagg 480
 caggttctct tggcttggga gcagacagat 510

<210> 102
 <211> 942
 <212> DNA
 <213> *Megathura crenulata*

<400> 102
 ggcttgcctt actgggattg gaccatgcca atgagtcatt tggcagaact ggetacaaagt 60
 gagactccac tgcactcagt tactggggaa actaaaaaca accctttcca tcacgcccaa 120
 tgggcgtttg aaaatggtgt aacaagcagg aatcctgatg ccaaacctttt tatgaaacca 180
 acttacggag accacactta cctcttcgac agcatgatct acgcatttga gcaggagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacattg atgggttggga 300
 ggacagtga aatattcaat gtctctctct cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tctctcttgg gccatttggc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctgcgcctcg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactcgaa caacaacgag aaaaacgtacc acaactctgt cccactaac 540
 gtttatgact atgtgggagt ttgtcactat cgatatgatg accttcagtt tggcggatg 600
 accatgcag aacttgagga atatattcac aagcagacac aacatgatag aacctttgca 660
 ggattcttcc ttctcatat tggaaatcca gcaagcgtag atatcttcat caatcgagaa 720
 ggtcatgata aatacaaat gggaagtgtt gtggtatcca agaatgaaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttcag cattactgtt gagatcacgg atgttgatgg atctccccc 900
 tctgcagatc tcaattccacc tctgtcata acttttgaac gt 942

<210> 103
 <211> 1248
 <212> DNA
 <213> *Megathura crenulata*

<400> 103
 gctgatgcca aagactttgg ccatagcaga aaatcaggaa aagcgttga ttctctgaca 60
 gtccaagaac aaacttcgtt gaggcgagct atggcagatc tacaggacga caaaacatca 120
 gggggtttcc agcagatgtc agcatccac ggagaaccaa aatgggtgcc aagccccgaa 180
 gcggagaaaa aatttgcagt ctgtgttcatt ggaatggctg gaaatggctg ctggaacaga 240
 ttgtctgacag ttcaaggaga aaatgctctg aggaacacatg gctttactgg tggactgccc 300
 tactgagact ggactgcagt aatgagcgcc ctccacatt ttgttcttga tctactttac 360
 aatgatgcta ttccagcca ggaagaagat aacctatggc atcatgttga catagactct 420
 gttgggcatg atactacaag agatgtgcgt gatgatcttt atcaatctcc ttgttctgt 480
 cactacacag atattgcaaa acaagtctct ctggcctttg agcaggacga ttctctgtat 540
 tttgaggtac aatttgaat tgccataat ttcatcaatg ctctgtgttg tggtaacgaa 600
 ccatacagta tgtcatcttt gaggtatatt acatacagtc caatctctct tctgacccgc 660
 tccaatacag accgaacttt ggccattttg caagctttgc aaaaatacgg ggggaaacca 720
 tacaacactg caaactgtgc cattgcattc atgagaaaaa ccttcagcgc atttgttctt 780
 gatagtgtca taaatccaga tgacgaacct cgtgaacatt cggttctctt ccgagctctc 840
 gactacaaga caaacttcga ctatgagat gagagccttg catttaattg tctgtctatt 900

gcccaactg	accgagagtt	gcagagaaga	aagtccacatg	acagagttctt	tgcaggatgc	960
cttctctcatg	aaattgggaca	gtctgcactc	gtgaaattctt	acgttttgcaa	acacaagtga	1020
ctcgactgtg	accattatgc	tggaagaattc	tacatttttgg	gagatgaagc	tgagatgcct	1080
tggaaggtatg	accgtgtgtg	caagtagcag	atacacacagc	agctgcacga	tttatgatcta	1140
catgtctggag	ataattctct	ccttaaatat	gaagcccttg	atctgaatgg	cggaagtctt	1200
ggtggaagta	tcttttctca	gccttcgggtg	attttccgagc	cagctgca		1248

<210> 104

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 104

ggttcacacc	aggctgatga	atatcgtgag	gcagtaacaa	gcgctagcca	cataagaaaa	60
aatatccggg	acctctcaga	gggagaaatt	gagagcatca	gatctgcttt	cctccaaatt	120
caaaaaagg	gtatatatga	aaacattgca	aagttccatg	gaaaaccagg	actttgtgaa	180
catgatggac	atccctgttg	ttgtgtgtgc	catggcatgc	ccacctttcc	ccactggcac	240
agactgtacg	ttcttcaggt	ggagaatcgc	ctcttagaac	gagggtctgc	agttcgtctt	300
ccttactggg	actggaccga	gaaagctgac	tctctgccat	cattaatcaa	tgatgcaact	360
tatttcaatt	cacgatccca	gacctttgat	cctaactcct	tcttcagggg	acatatgtcc	420
ttcgagaatt	ctgtgacgtc	cagagatcct	cagccgaac	tatgggacaa	taaggacttc	480
tacgagaatt	tcattgtggc	tcttgagcaa	gacaacttct	gtgactttga	gattcagctt	540
gagctgatac	acaaagccct	tcattctaga	cttggaggaa	gggctaataa	ctccctttcg	600
tctcttgatt	atacgcatt	tgatcctgta	tttttccctc	accatgcaaa	cgttgacaga	660
atctggggcca	cttgccagga	cttgagaga	tatagaaaag	aaccatacaa	tgaggctgac	720
tgccgagtc	acgagatcgc	taaacctctt	caaccattta	ataaccagga	acttaacagt	780
gattccatga	cgcttaaaaca	caacctccca	caagacagtt	ttgattatca	aaaccgcttc	840
aggtagcaat	atgataacct	tcaatttaac	cacttcagca	tacaaaagct	agaccaaact	900
attcaggcta	gaaaacaaca	cgacagagtt	tttgctggct	ttattcttca	caacttgagg	960
acatctgctg	tttgatgat	tttatattgc	gttgaaacaag	gaggagacaa	aaactcgcaag	1020
acaaaggcgg	gttccctcac	gattctgggg	ggagaaacag	aaatgccatt	ccactttgac	1080
cgcttgtaca	aatttgacat	aacgtctgct	ctgcataaac	ttgggtgttc	cttggaacga	1140
catggattcg	acatcaaatg	tgacgtcaga	gctgtcaatg	gatcgcatct	tgatcaacac	1200
atcctcaacg	aaccgagctc	gctttttgtt	cctggtagaac	gtaagaatat	atattat	1257

<210> 105

<211> 1239

<212> DNA

<213> Megathura crenulata

<400> 105

gatgggcttt	cacaacataa	tcttgtgcga	aaagaagtaa	gctctcttac	aaactggag	60
aaacattttt	tgaggaaagc	tctcaagaac	atgcaagcag	atgattctcc	agacggatga	120
caagctattg	cttctttcca	cgctttgcct	cctctttgtc	caagtccatc	tgctgcacat	180
agacacgctt	gttgccctca	tggtatggct	accttccctc	agtgccacag	actctacaca	240
gttcagttcg	aagattcttt	gaaacgcacat	ggttctattg	tccgacttcc	atattgggat	300
tggtctgaac	cgacgtctgc	actccctgat	ttgggtgacac	aggagacata	cgagcacctg	360
ttttcacaca	aaaccttccc	aaatccgttc	ctcaaggcaa	atatagaatt	tgaggagag	420
ggagtaacaa	cagagaggga	tgttgatgct	gaacacctct	ttgcaaaagg	taactctggt	480
tacaacaact	ggttttgcaa	tcaggcacta	tatgcactag	aaacaagaaa	ttactgtgac	540
tttgaatact	agttcgaatt	tttgcataat	ggaattctatt	catgggttgg	aggatacaag	600
accattccaa	tagtgatact	tcattacgca	tcatacgatc	cactgttcta	tatccacct	660
tcgcagacag	atcgcatctg	ggctatctgg	caagctctcc	aggagcacag	aggctcttca	720
gggaagggaag	cacactgcgc	cctggagcaa	atgaaagacc	ctctcaaac	tttcagcttt	780
ggaagtccct	ataatttgaa	caaacgcact	caagagttct	ccaagcctga	agacacattt	840
gattatcacc	gattcgggta	tgagtatgat	tcctcgaat	ttgttggcat	gtctgtttca	900
agtttatcata	actatataaa	acaaacaacg	gaagctgata	gagttctcgc	aggattctct	960
cttaaaagat	ttggacaact	agcatccgta	tcgttttgata	ctcgcagac	agaccagagct	1020
tgccaaagag	ctggatactt	ctcagttctc	gggtggaagt	cagaaaagcc	tgaggcagctt	1080
gacagggcttt	acaagtagca	cattacaaaa	acgttgaaag	acatgaaact	gcgatacagat	1140
gacacattta	ccatcaaggt	tcacataaag	gatatagctg	gagctgagtt	ggacagcgat	1200

ctgatccaa ctctctctgt tctccttgaa gaaggaaag

1239

<210> 106

<211> 1251

<212> DNA

<213> Megathura crenulata

<400> 106

```

catgggatca atgtacgtca cgttggtcgt aatcggatc gtaggaact atctgaactc 60
accgagagag atctcgccag cctgaaatct gcaatgaggt ctctacaagc tgacgatggg 120
gtgaacggtt atcaagccat tgcattcatt cacggtctcc cggtctcttg tcatgatgat 180
gagggacatg agattgcctg ttgtatccac ggaatgccag tattccaca ctggccacgg 240
ctttacaccc tgcaaatgga catggctctg ttatctcac gatctgctg tgcatttcca 300
tactgggact ggaccaaacc tatcagcaaa ctgcctgac tcttcaccag ccttgaatat 360
tacgatcctt ggagggatgc agttgtcaat aatcctattg cttaaaggcta cattaaatcc 420
gaggacgctt acacggttag ggaatcctcag gacattttgt accacttgca ggacgaaacg 480
ggaacatctg ttttgttaga tcaaacctct ttagccttag agcagacaga ttctgtgat 540
tttgaggttc aatttgaggt cgtccataat gctattcact acttggtggg tggctgcaca 600
gtttatgctc ttctcttcca acactatgct tcatatgacc cagctctctt tattcatcac 660
tcctttgttg acaaaatgat ggcagctctg caagctctgc aaaagaagag aaagcgtccc 720
tatcataaag cggattgtgc tcttaacatg atgaccaaac caatgcgacc atttgacac 780
gatttcaatc acaatggatt cacaaaaatg cacgcagtc ccaacactct attgacttt 840
caggaccttt tctacacgta tgacaactta gaaattgctg gcatgaatgt taatcagttg 900
gaagcgagaa tcaaccggcg aaaaagccaa acaagagtct ttgcggggtt cctctacatc 960
ggcattggaa tgcattgata tgcacgattt tggatttgca agacagctga cgactggcac 1020
gcatctggca tgactcttat cttaggaggt tctaaagaga tgcaactggc catgacagg 1080
aaactttaaa acgacatcac ccaagctttg aaggctcagt ccatcacacc tgaagatgtg 1140
tttgacactg atgctcctt cttcattaaa gtggaggctc atgggtgaaa caagactgct 1200
ctcccatctt cagctatccc agcacctact ataacttact cagctggta a 1251

```

<210> 107

<211> 1185

<212> DNA

<213> Megathura crenulata

<220>

<221> misc_feature

<222> (164)..(164)

<223> "n" is a, g, c, or t

<400> 107

```

gatcatattg ctggcagtg agtcaggaaa gacgtgacgt ctcttaccgc atctgagata 60
ggaacactga ggcactgctct gcaaacgctg atggatgatg atggacccaa tggattccag 120
gcaattgctg cttatcacgg aagtcctccc atgtgtcaca tgcntgatgg tagagaagtt 180
gcattgttga ctcatggaat ggcattcttc cctcactggc acagactggt tgtgaaacag 240
atggaggatg cactggctgc gcatggagct cacatttgca taccatactg ggattggaca 300
agtgcgttta gtcatctgcc tgcccctagt actgaccacg agcacaatcc ctccaccac 360
ggacatattg ctcactcgga tgtggatata tctcgatctc cgagagacat gctgttcaat 420
gaccccgaa cagggtcaga atcattcttc tatagacagg ttctcttggc tctagaacag 480
acagacttct gccaaattga agttcagttt gaaataacac acaatgcaat ccactcttgg 540
actggaggaa ataactcata tggaaatgta tcaactgcat atacagcata tgatccactc 600
ttttatctcc accatttcaa cactgatcgt atctgggcca ctggcgaggg actccagaaa 660
tacagaggtt ttcaatacaa cgcagctcat tgcgatatcc aggttctgaa acaacctctt 720
aaaccttaca gcgagtcacg gaatccaaac cagtcacca gagccaatc tagggcagtc 780
gattcatttg attatgagag actcaattat caatatgaca cacttacctt ccacggacat 840
tctattcag aactctgatgc catgctcaa gagagaaaga aggaagagag aactattgca 900
gccttctgtg tgacgggatt tggcgccagt gctgatgttt cgtttgatgt ctgcacacct 960
gatggtcatt tgcctcttgc tggaaacctc gcggtacttg gtggggagct tgagatgccc 1020
tggctcttgg aaagattggt ccgttaacga atcacaaagg ttctcaagca gatgaactct 1080

```

cactatgatt ctgagttcca ctttgagttg aagattgttg gcacagatgg aacagaactg 1140
ccatcggtac gtatcaagag ccctaccatt gaacaccatg gagga 1185

<210> 108
<211> 309
<212> DNA
<213> *Megathura crenulata*

<400> 108
ggtcacgac acagtgaacg tcacgatgga tttttcagga aggaagtcgg ttcctgtgcc 60
ctggatgaag ccaatgacct taaaatgcga ctgtacaagc tgcagaatga tcagggtccc 120
aatggatgat aatcaatagc cggttaccat ggctatccat tctctgccc tgaacatggt 180
gaagaccagt acgcatgctg tgtccacgga atgcctgtat ttccacattg gcacagactt 240
catacaatcc agtttgagag agctctcaaa gaacatggtt ctcatttggg tctgccatac 300
tgggactgg 309

<210> 109
<211> 2561
<212> DNA
<213> *Haliotis tuberculata*

<400> 109
gtaagtcaac gtctttgttt taagtttgat gcatatctat cattgcgttt taaaaatcca 60
ttacacacaa cgtgtctcta ttggtcttca cctgtttaac gtatatattg tttttaatgt 120
gaaaatctga gattattttc atttccgtca atattcgtaa aatactatca aaataaaatt 180
gcttcagcct attgcatttg cagttttcgc agaataacga ggggaaggcgt acataaaaaa 240
taaacccagt tatattcaag catgtttata atttcttat agattataac atcatatcaa 300
aacaccaatc tggatttaaa cccgtgaatc caaagtatac caattaacgg aactttatca 360
tgttttatca aaggttttag atgagggtaa agaagtcgga gctatattt gcgatatcag 420
caaaagcctc tatcacgtct tgcacacagg gctgttatct aaactcgaat ccacagagaa 480
aaatatttca gccgataagag aacagtcggt ggctatcatt gggtcacaaa caagtccaaa 540
atttcgatta gccgggtgtc cccaaggctc tgtcttgggg ccactattat ttctcaccta 600
tataaacgat tcaaatatg gaatataaag caacgtaaac ctacccgcag atgaacacct 660
aagttataga caatccgttt aaaaccagc cactgcttaa taatgactta ggccgtcttt 720
cagactgggg tagtaagcgg caggtttaat ttccacttga aaagacagaa accatgggat 780
atttcaaaaa cagcaatgca agtcctaaac ttcaactact acttgatgat gctgggattt 840
ctaaagtgtg tgaacaaaaa cacattggcc tgatcttaca agataaccag acagaaacca 900
tgtttttttt caataacacg aatgcaagtc ctaaaacttca actactactt gatgatctgt 960
aaatttctaa agtgtgtggt gaacacaaac accttggcct gattctgcaa gataattgaa 1020
gggttcagaa acataagcaa gttgatgtgg ggttttctgg ggggtgtgac aacacgaaa 1080
gacctgcgaa ctaatgttag ctcaaagggt ttacaccccg gtccaaagtg gggatcgacc 1140
caggcacctt tgccttttga cagctgcctt tccaaaaaat ctcaattcga aaacgaaatc 1200
taataatttc atgagcgata caaccgtttt tcataatgct tgggtaccgg atactgtgat 1260
aacatctgtc taccctattg gtagtccccc ataaaaatga tttatgttta taaacacaa 1320
gttttatagg ttacagttag aagaagcatt tctattggct taggaaattt aaatactgtt taaatcacat 1440
actattgtgc aaagccatat tacaggtctt ttgcaacatt ctgcccacag aacggtattt 1500
acactacagg taatcctatt atgcttatcc ctgtgttact tcacaaccag tggactgaat 1560
aagttaaagc tgagtgtaaa atactgattg ctgtgttact gttttctaat tgttaagt 1620
acaacctgtg tttttcttga aagtcacaaa catccagtcg gttttctaat tctatcagt 1680
ctagtttcat aaagagcatt acgtaatggt gaataggagt tatcaattgt ggccacagat 1740
gactcctagt tcgttacctt tttataaaaa catccatgtg tttaatgttt ggccacagat 1800
ataaacaaga agaaatcgga taaaatctac attttgacca atcgggaaggc tggccctctc 1860
ctaactctaa tcaattttgt gctcaaaaac atactcaacc agacattga actatgtata 1920
tatcagaagt aaatggtaac aataaacttg tatgttgacc agacagaatt aggggtgaatc 1980
tgaataccaa ctattgtcac atatgaatat ggataagctc tgcgcgtggt tgcggcggt 2040
gtgtgtgctg tgtgtctgtg tgtgtgtgtg tgcagtgctg cgaattgtgt tgtgtgtgtg 2100
tgcaacagaa tgtggttgag acacacttga atcagtgctg gattatgtc ttcaacagag 2160
tgatgtcttt aagtggtcct ggaacaaaaa aactgcgttg ggttgatcgt cctctgtgac 2220
aagtttggac gcgtcacgca gctctgatcc cactatgttt cactcgtctt cactcgtctt 2280
acgcgaatat tatgctatgt gtggcgatcc ataccatagg ttgggaacct ttcaatactg 2340

taccgagctt	gggcgtgtca	caaagctatg	ataagatgac	aacacgtctt	ggcatcttgt	2400
ttccctcggtg	tcacgcgctg	ttatgctatg	tgtagctatc	acaccttagg	ttgggaaagt	2460
ttccacattt	tcacgctcgc	tacatgtttc	cttttgtttt	ttcccttagt	atcagcatac	2520
cgtagtatct	atattttaag	agcattttga	ttttcttaca	g		2561

<210> 110

<211> 5043

<212> DNA

<213> *Haliotis tuberculata*

<220>

<221> misc_feature

<222> (2928)..(2928)

<223> "n" is a, g, c or t

<400> 110

gtgagtttct	taacattgtc	atggtacatg	gatatacgct	cagtgggaaa	gcaggatctc	60
cccttggttg	aagtattcac	ttgtcacgcc	aagtgttcga	ttcccaacct	ggaatactgt	120
catatagtaa	attgatacac	tacttacatt	taattctcca	ctaaacgtca	acgtccctta	180
cttcacggcc	cacatgttgc	gtattagtga	gtgagtga	caggcgatac	gtatttaacg	240
tcaaaatcag	aatatttcag	ccatattgtg	acaagaattg	aatataaata	attatactta	300
taatgcttat	aaatataaat	tatataaata	cctataacta	taaattagtt	atactagtat	360
ttatcaaaaac	atatttgccg	cgacactgca	cgcgataact	tcaagttgct	tcacctcaag	420
cgtagtaact	ctcatactct	gtaataagta	tgtagactaa	gtgagtgtca	tcactctcat	480
gcttcattag	tttcgtcaga	tgcggtgctc	catacagta	cattcagatt	atgggatcca	540
gagctttctt	attctcaagta	tttcgtagtg	taaaagcata	ctacttcccc	aatgactgac	600
gagacagtag	gcaacggttc	tttctcctg	actaggtgag	tgccactgat	aaatcattat	660
gcctttaaca	taggaatgtg	tagcagtgca	catgtttcag	aattgcgacc	ttatggttgt	720
aaagattaca	aactttcaaa	cttacttgag	acaggtttcca	tatgtcgat	ctgaataatg	780
gtgaaggtag	ctgattcgat	gcaatacaca	gacataataa	catattgtcg	ccctgctatt	840
ccggaagggt	ctatttgtat	gtaacgttcc	ttaattggaca	caaacggaat	tattagttaa	900
acataactcaa	caaaaactatg	ttatttttga	atgggtagca	ccgaaatcta	ccgacagtgg	960
ttcgtaaaaag	tagaacattc	tgacataaag	aaaaatcatt	ggctttaaat	atatgcaagt	1020
tacttgtctc	taacaaccag	ttttatacac	atttcagaga	acgggggaatc	cgcgtagaca	1080
atatcaacga	gtatatacac	aatatataat	taaaaaacgt	gagtgccctg	caagggaagag	1140
agcgagattt	gccaaacagg	gggggtggtg	tgagcttgaa	tcgtggagaa	acgtagattg	1200
aaagacaaga	tgacatctaa	tgatccgaaa	atcaaacaca	ggattaacctg	ggatgcagaa	1260
gaatgaatat	ctcaagcata	catgcaacac	ttcatgaatg	catctcaaac	attttctgtca	1320
gatccgtagt	atgaagattt	gtaaaagcaat	ggtttaaat	gtccctaaac	gttttagttg	1380
agatgataga	ggctaggctg	tatgttgaac	gaaccattt	acattgtgtg	ttcatagta	1440
tttaattttt	tttcatttta	tagatgtaca	ataaaattgg	aaactaaaca	tttcccttta	1500
ttgtttttg	tttactctgt	catgggtatg	ttttgaaaga	tcgttgatatt	tattggcat	1560
tcacaaggtg	gaaaaaggct	actcagtttg	atttcaagtt	tatgtaacct	ctttatctga	1620
cgtcccaaaa	tatgtatagc	ctgtttcatc	tgctggtatg	tggtatttcc	tacttccagg	1680
taggttagca	ttaatactta	caaaaacata	cgtgtaccag	atttcagta	ctcagagatt	1740
gataatgcatt	gtcgtataga	taggtcaaaa	ctttcgatat	caatcacaat	gaacctatgg	1800
accctgatac	ggaatgatac	gttacacttt	agaaacaatt	caaaaatatg	cgtgtccacc	1860
tttcaggttaa	taattgtttg	cggactacga	tagtgctgaa	cagcaggaga	ggcaacatgg	1920
ttcgtattgt	agacaggttg	agtgattttg	tttgcgaatt	taaggttctg	aatcacataa	1980
gacacggttc	agttaatgga	taaaaccaatc	attagataga	tagagattag	tcgctgatatt	2040
gctcgggataa	agcttagtgg	gacgtttaagt	ccactctcaa	cttctctcat	ttttccaaa	2100
acagtttttaa	ttcaggctca	tgacaaggctc	gtactgttgc	aaaggattct	acttcaagca	2160
gagatgtctc	atgaatacag	tacagggttt	ttgaagttaa	tcagtgccgc	cgtcggacc	2220
attctctgat	gcgaattata	ccatccatgc	cgtctatagg	tatttgtatt	aagtctgtag	2280
aatctaaattc	gcgagttgca	aaatactgctc	accatttatc	gcttcaacct	atgtttggta	2340
cttcgagattt	acacaattat	atgtataatg	ttcgtctttc	gaaacaacaaa	accttaaaat	2400
catcccaaaat	tttgggagat	tttattcgag	aaatacaacct	gagatgttga	atcgggagct	2460
cgctcttatc	aatggtggac	tcgggaaggga	agtaaccgct	gatgagccaa	aaacataaacg	2520
caaacatagc	gaagtggaa	cttttgaacc	agttattatg	ttgtgtggac	atgtatgtgt	2580
taatttgacc	attcgaacaa	ctttactatt	ctattcataa	tggtttttaga	tttacatttg	2640
aatataaaga	gatgagttta	agattatatt	attttccctt	tatagttctg	cgtgatttga	2700

gggcaatatt	tatgtatgtt	cgttcaattt	tcatttatca	tttggaaagg	tatatcataa	2760
gattattatt	atcattcttg	aagtaagtta	tacatatata	tatgtcttga	gtagcttatt	2820
ttcaatttat	tatcatccgt	catccaattt	tatttccaga	aagtataaga	aataacgaga	2880
gagagagaga	gagagagaga	aaagacagaa	atgaagttag	gagataatna	ttatcaagaa	2940
aaccaacggt	tgaatttttt	gttttagacaa	gatattcatat	caataaacctt	gcactattac	3000
gggaataggc	gggcgttcca	tatgcacaat	gaatcgtcag	ttaaaaatcaa	cattaaacctt	3060
aaaaatctcc	tcatatttaa	agttgatcta	cctctgtgat	tattgtagac	tattagacag	3120
aagctgcagc	tgacaccagc	aaccagatat	catacccaga	cttaaaaagc	tgcttcccttg	3180
atgtttcaat	ttattttccat	ttccattatt	tccttttatt	gggtttccatt	tatcaaaacct	3240
accattctga	ccagtgggag	attgatattg	tgtatttatt	taattttctt	tgattacaat	3300
atcaagaatg	tataggagct	attccttgtt	cctaaaaacc	gatagatcca	taatttccat	3360
tttgggataa	atggaaacta	aacacaaact	ttacagttaa	cacgagttag	caagttaggt	3420
tttacgcgtg	ttttagtagt	attccagcaa	tatcgcggcg	ggggacacca	gaaatgggct	3480
tcacacagtg	aatgcattgt	gggattcgaa	cccggttctt	cgcgtgacg	agtgaaacgt	3540
ttagccacta	ggctacccca	ccgccttatt	atagttaa	cgaatacttt	tctcaagcct	3600
caaatatgtc	cattctagag	agactgaatc	tgatcctgaa	tctgcggacc	ggcttgaat	3660
atcatcccac	taactcaatg	tacaaaagta	ctgtagattg	tcagttcaaa	gcagatttcc	3720
acaaccctat	tatattttgt	cctgctcatt	aagatattca	gactcactca	aactgctaaa	3780
tgattttaat	cctactttga	gatgttttaa	ctttttattc	atgctttttt	ggcttctcgg	3840
tcctgtataa	aggtaaagca	ggtaaaacta	cctaacctgt	tgattttatt	catagttttg	3900
cgatcagatt	gaaaaccggaa	tgacacagtga	agtggtgcat	acatctttcc	acagagatgc	3960
tggtactacg	gtgggtacaac	cgcattggct	ttgtgaaagg	atatagtggt	tttatggagac	4020
tgactcatgt	tccaatgctt	agagcggaa	gatctcggtc	ttcatgaaaa	aatgtgtgtt	4080
gaagttaacc	cccagtcctt	aacagaaact	ggggaaagca	gatggatatt	ccaagacatc	4140
ttgcagtggt	gtgaagatga	tcgtttacaac	atctgcagaa	aaagttattt	cttgtgaagaa	4200
tatgccaaag	catcaactgt	agtgttttga	agatgtgata	tgccaacacg	cagcgtgttaa	4260
tattgctttt	tgtgtatttc	tgaagatccg	tatgagcatg	gcgcctaaat	atcagtttaa	4320
tggtatcgcc	aagatctttc	cgagatggta	aacacatat	ttggccattt	tctttgtaaa	4380
tgggcgacac	agaagatccc	cctgatttgt	tggtatgaga	cacaaaaaac	ggctccctct	4440
ccctttgtga	tgttaattga	gccctggaaa	cattgaaaga	cttcttctcc	agcaagcaag	4500
ccaccaacca	caagttgtat	aaatcgcttg	cggacttgaa	tacggcagtt	ggacagatgc	4560
atcacagcag	agagggccga	actaaaacat	ctaaacatgg	aaaaactgta	agacagagct	4620
ttgtgttacg	acgtacgtaa	attcattgaa	tgtttgaaaa	ggtagaaaaa	tattaaactc	4680
ttgaaacctc	gctctgtttg	ttgttattg	tccccacat	ttgcacaaatg	tattccacgc	4740
gggcagacac	attttgttta	atcttagcca	ggttcaattt	agccttgccg	ccagactcat	4800
tgatatcgtg	gaaggcttata	ggtggccacg	tcttctaaga	tcttatgcta	tctttaccag	4860
aatccaatgt	aaagagttca	aacgcattgt	tcgctttgat	tgtgatctct	tcttagcacc	4920
tctctctcac	ccagagttca	cctgcactgc	tcttgactca	caataagctg	acgtgctgtc	4980
atatattgtc	aacattgtat	acgttggcgt	taagcccaac	tcacttccgc	tgctttttgg	5040
cag						5043

<210> 111

<211> 659

<212> DNA

<213> *Haliotis tuberculata*

<400> 111

gtaactacaa	acgtcgtccc	attcatcacg	gagaaatata	caattgtgtt	gtaagagcgg	60
tatactgttt	gccaatcgtg	taattgaaac	gttgatgatg	gtgtcttctg	atttcaattt	120
gtatgcactt	agacatgac	aatgtttctg	atgtgtcaca	gatgttcggg	gtgtccactt	180
caaaagatca	aattcatatg	acgtacacag	agcaagaacc	aacagtgaag	agtcgtgatg	240
acttcgctct	taaaagcaat	ggaaaaatat	tttcaactta	ccactagccc	ataacacgcg	300
atattagatt	attcaagcga	tgtaacacatg	tttttaatat	caatctcatg	gttctgatat	360
taccggagac	atgcaacagg	ctgcacattat	agccaggaaa	tcttatgaat	atgtgcacat	420
tttttctttg	attctgtgatg	acgagaaata	ttcggaggca	aaagatttgt	tttcagaaca	480
gaatcagggg	atcagtgaca	tcgtcactgc	atggctacaa	tattgtcgtat	gtgactgttt	540
ctccaaggat	tttcatctca	ctgtctgtac	tttgaatcta	caaatctgta	ttaaagttaa	600
gacaatttta	cccttgctca	tttgtaaacg	aaatataaca	tgagtgttta	tgctgcag	659

<210> 112
 <211> 904
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 112
 gtaagtcttg tttacagttt cattataaaa acatagcagt tttaagtta ggggcagatt 60
 ctaactctcta atattccttt caactcactt tattggtgcc ttcttggagt gacattttaga 120
 aactaagaca agagggaagat gaacaaatgt ttagaggata gacagcttgg atgcaatttc 180
 ggaccagatt ctaacagcgt catgaagcaa gtgatacaca acgttatcaa taaccagaaat 240
 atacacatag atggttttag ttataaaatg aactattaac ggcatttgtg ttatagacag 300
 tgagggaagac gccagataga caaagggttag gggccttggg tagataatga gaagttgag 360
 aggtgtaata acttaaatct ctcttgacta ttgatttgtt ctaagagttt tcttatctta 420
 cagtcggcca gttgggtcaa agatggtgtg attcggatgt gctttgtgtg ttctgogatt 480
 gctgatttag agtcagttta ctccagatga atgaagtcc cagattctta tgtttaagtt 540
 tgtttcactc acgcatgaag acatcaccag cagggctgtc ttatttctta gtacgttatt 600
 tacagcaagc ttgtaacgta tgcctgaatt ctgtgcctct gtagaacaca gcattctatt 660
 tgcctgttgc ctttagtaga ctgcggtgtg gatggttggg taactggtat gctgacgaaa 720
 gaattgttga cgtggtggtt tgccttgatg ggttcgttga cttggtttgt tggatactga 780
 ttaagggtgac tctgctggga ggccttgatt ctggggccgg tgttctttgc tctctgtct 840
 aggttgccga ttatttccca acccacttgt tccattacac tcaaaacctg ctatcaattt 900
 acag 904

<210> 113
 <211> 543
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 113
 gtgagacatt attacacttc tatttagtag tgggggcccc atagctcagg tggtagagcg 60
 tcggccttca gcttctagtc tcgcccacaa gagcgcgctg gctaaaagggc cggagtttaga 120
 ttcccgcggg ccgacagcaa tatctccgaa ggggagaaaca gttctccagt cggatgaatt 180
 ggggtgcaat gttgtaccac tgaatgcgt gcagcaccac caatccaaat accagccttg 240
 ccgctgcgtt gctactacat agtaccaccc ggattcaacc gggctatata ggttctcttc 300
 cagcagtaaa tctgacagtc gccatatagc tgggatattg ctgagtgaga cgttaagccc 360
 caactcactc actttatatt tagtattcta tttagtatcg acgcatgacc atgtgtgggtg 420
 gtctactcat ctcaacacga ccgattaacg ttaagagctg ccaacatgat tctcttcttc 480
 tctttagcct ctttatgcca aaagctatat ataatgtag gacctacat atattatttc 540
 cag 543

<210> 114
 <211> 2689
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 114
 gtaagtgtat tgtcttaata ttgttttaatt ttttgcagaa atttgatttt aaattgtgta 60
 ataacagtag acattttttac gcaacagcag tcattattgt gtgtgaagat gtcaaaaccag 120
 aaaggtttca atcgtgaaaa caaaaacaat tctctatctg tatacccctc aatcaccgta 180
 tgatcacaaa tctaggaat attacaatac tgcttcatag agtaactgct gtttgtgcca 240
 gagctggaat cgaagtttct gatagtccac agctacatga tagtaaatga acctgtacac 300
 atcaacgggt gatcatgaaa attttgtatg ttgaaagtgt tctacctgtat tagtgaactg 360
 gctacctgta taactgaag tgctacctgt atgactgaaa gtgctacctg tatgtctgaa 420
 gtgctacctg tattagtga cgtgctacct gtataactga aagtgtctacc tgtatgactg 480
 aaagtgtcac cttgattagt gaaagtgtcta cctgtatgag tgaacgtgct acctgtataa 540
 ctgaaagtgc tacctgtatg actgaaagtgc ctacctgtat tagtgaaagt gctgctctga 600
 ttatgaaag tgctacctgt atgactgagc gtgttacctg tatgactgaa cgtgctacct 660
 gttattgaga aagtgtaac tgtagtgatg aaagtgtcac ctgtattagt gaaagtgtga 720
 cttgtattag tgaagtgtct acatgtatga ctgaaagtgc tacatgtatg aatgagagt 780
 ctacctgtgt gactgaaagt gctacctgta ttagtgaag tgctacctgt atgactgaac 840
 gtgctacctg tattagtgt agtgctacct gtaccaactg gatgttctca cttctttggc 900

gaatatctcg	gctcaaaaa	gtttttcagt	atcatagtcg	tatcagtttg	atttgtatgt	960
gcagtggaat	cattttcgtc	aaataatcaa	aactgggtgt	gaactggcgt	tcacgtttta	1020
tggtgtgtaa	acaaattctg	taagtaaa	tatttttaggg	atatctgtat	gacatgaact	1080
gaatgcttta	agggtagcat	gccatgacaa	attgctgaat	gtctgaggat	tggtggagca	1140
ataaatcatt	attaagacaa	aaatcagaaa	cgctccatttt	cacttttaac	agtgtagctg	1200
tctgaatgcc	ccctactttt	tggaagagta	tatatgaatt	atcggaacaa	taaaacgtta	1260
aatggcaaat	gtcgggcata	tgtcaggaca	ttattaccgc	agtttatagt	catatttacc	1320
gggtctagga	caattgtcac	cccgacaatt	gccaccgcga	caattgccac	ccaaaaataa	1380
aaatcatcgt	aacagaaaa	aaatattgct	ttcagccctt	attgagtgat	ataatgacat	1440
ttatgttcgt	aaatgtctcg	tttgataata	ataataacaa	taataataa	ttacaatact	1500
gcaatgtagc	tatcagtact	tatcatttta	tcacagagta	tatatagatt	ctagagtcgc	1560
atgtgttagg	caacacttcg	tcggtagggc	gttaggtagt	tatcattagg	gctgagattt	1620
gcgcacaaat	tcgtattgct	atatactgcg	atacaccggt	acctgttttg	caatacgtaa	1680
acttaggcga	atatgacagt	ttttccatga	ttattttcac	gtttcaatgc	ttaaaaaggt	1740
cttatctggt	atctccttga	aggtttaata	aaataacaat	aaacataaat	cattattgaa	1800
aattaatgaa	caaaagttaa	gcgcttctca	gttaccttaa	cctaacttat	ttatgaatgg	1860
gattactatc	caagaatgtg	aaattcacaa	acaccttggt	ataacactgc	aaaaacgactg	1920
ttcatgggac	ggacatgaaa	aaggtagtgc	ccatgttaaa	ctgttgagaa	agtttccctat	1980
actgtttgtc	ccgaaaaagg	ctaaagacca	tgtaactaat	aattattcta	tctattttctg	2040
attactgttc	tcattatttg	gacaaactgt	cagatcggtg	gcataccaag	tcgtctctaat	2100
cggtgtgata	aacctgtgtc	aataacatgt	tgctccaaca	tccaagctca	ctctaacctt	2160
gtcaataacct	gcattctgaac	aaatgtatat	ttaaagcgat	agcatccaag	ctcatcttta	2220
aaatgaatat	tttctctttt	tctacaaaa	cattattttg	ttgacagttg	tcctccctat	2280
tatagtaaaa	agaactgggt	ggcaattgtc	ctaggtggca	attgtccgga	tggaacttgt	2340
ccgggtggca	attgtccggg	tgggcattgt	ccagggtggc	attgtccctg	tcccatattt	2400
acgtatccca	ttttctgctc	tgtaatttta	aataaactca	cctgcctaag	gtgaagcagc	2460
atgtgtcacg	tgaacatcgt	ttgggggcga	gggcggaatc	agtgcttga	aaagtaaatga	2520
atactgtaca	tagagtagcg	tatcttgaac	cttttattag	ctttgatatt	gtgcttaata	2580
ttacatgaat	gtatttcaat	atgtaattat	gtgttcaaat	gaatggttga	cttgaatggg	2640
tttattgctt	tatatgctac	atcaacatgt	gtgtttcttt	tcatttcag		2699

<210> 115

<211> 561

<212> DNA

<213> *Haliotis tuberculata*

<400> 115

gtaagtaaat	ttacaaaaat	tggtgttctc	taactatcct	aagtattcaa	tcgttagcgt	60
gtacctatct	gcataatgca	ataccctgac	tcacataaag	tatagtatat	ttactctggg	120
cgaaaaacaa	caaattgaaa	acaagagtgg	acgtgctgtt	atgattttct	ttcatctttt	180
ggttcgttgt	gtaatgccac	agccagcaat	tcacagatata	tagcgacggt	ctatgaatac	240
tcacagctcg	accagacaat	cgtgtggaat	ggtttaggca	cattatatca	aatcattgtg	300
tgaagatagt	agttatgagg	tcacaatggt	gtcttgtttc	cccggtgcag	tagtgacgtc	360
atttcatgac	tgaaatctct	tcaacgcgcg	ttagcaataa	taggctcagt	agatttcaac	420
caattacaat	cagtagaaaa	ttctctatac	tattcttatg	ttgtacccgt	atattccctat	480
gcaaaaataa	gtcatctaat	ataatcattt	tcgataaata	ctttgggcga	acaaatcaat	540
gtaacatcta	ttttcttcca	g				561

<210> 116

<211> 334

<212> DNA

<213> *Haliotis tuberculata*

<400> 116

gtacgtggat	ttgattacat	agcaatgcta	tatgatttca	gtaattacaa	cctcaagtca	60
tgtagccggt	ttagattgca	ttacatcaaa	cagcattgga	ttaaattggg	ggattgtcca	120
ggcccgatta	tggtgcattc	cgaaaaatagt	ttgtgtccag	tggtccacgtt	taaaaataaa	180
ccattttaat	catattaggg	ataattttaa	tagatgttat	agtgctttat	ttcatattgt	240
tacagtgac	agtcaccaag	gacatatttt	actctataga	tacacaaaa	ccaattaaaa	300
ccctgctttg	gaaagtctaa	ctttttcccc	acag			334


```

<210> 117
<211> 283
<212> DNA
<213> Haliotis tuberculata

<400> 117
gtaatgccat cttaatacac ttcgttcggt aaattatata tgttcgttta caacaccata 60
ccttgaattg aggttaatac tcacttgata ttgataatgt aatggtaatt gttcttggtt 120
tgaaaaccgt ttctgggggt tttattcact atccacctgg tggtagtgca gtaaacacat 180
tcgggttaat atgggtatct aatggacagt gaagtgtgct ggctaggcag ataccttggt 240
ttctgtgaat ggaggtagta gaaagggggt ttgatgattg cag 283

<210> 118
<211> 174
<212> DNA
<213> Haliotis tuberculata

<400> 118
gtgagtacct gtttgcacta agacttctgt aggctaaaag tgtaagaaat atcaattaat 60
ttcaattcac ccaaacttga aaacgggtacc tataatagggt aactttttgt ctacagtaaa 120
ctgaacatac ctacacattt catgaaatga tctctcaata ttttccacca acag 174

<210> 119
<211> 703
<212> DNA
<213> Haliotis tuberculata

<220>
<221> misc_feature
<222> (478)..(478)
<223> "n" is a, g, c, or t

<400> 119
gtaaaattac agagctttat gaagtgtggt cagagtgaag agaccaagat atacttatac 60
ccaaaactag ctagcaacag acgatttcac ttgtttcgga cactttgtat tatacgttgg 120
atcccaagggt aaacgggaaac gtaaccgaga atcagtcctgt aaagtgaagt agtgaagttg 180
ggggttaacg tcgcactcag caatacccca gctatgtggc gactctcaga tttactgcgt 240
ggagagaacc tacatagccc gggtttaaacc gtgtggtatg tagtaagacc agcgcgccat 300
ggctggatct tgacggacga aggggtggcg tgacagtatt ccagtgtgac aacactgcac 360
cccaatttca ccgaccggag aactgatctc cctctcgag atatcgctg ccttccacgg 420
gattcgaact cggtgacctt caagccagcg cgcttctagc gggggcgatt agaggttnaa 480
ggccgacggc tctaccacct taactatccc cgggccccac tcctgacgga aatgtttata 540
attcagcctt tgttttctta ttaaacactc ttggcagatt tcttatagat aatggattca 600
catgtagaca gtctcccat gttgtaactg gtagtcaaga gttagaatct gaatacttc 660
tccaagatgg atcaaggaaa acaataatta cttgatgttg cag 703

<210> 120
<211> 298
<212> DNA
<213> Haliotis tuberculata

<400> 120
gtgagatata tgcaaatgta atgttgtcca gatgcgttgt ttacatttat atgcttggaa 60
ttgtcctgaa cgaatacagt ggaataacca aaagctgaaa aataaaaaa tatatacttc 120
attctgaatt tgtcagttat gctgacccaa aaacacgcta tccatgtcga cactatattt 180
gcctttctga atctgagact gcgttatggt tctaataatc acgaaatatg gtatacaggt 240
tgtgtatctg tagaataccc aaggcagaat ttaaagggtc acacctgtt taatacag 298

```

<210> 121
 <211> 963
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 121
 gtaagtttgt gttggttagt gttggttgca tgttttgcca tatcgatagt atcagtggtg 60
 taacatctcg tttctagttc attcagttca ccttatcaga agctgtttgc tctcgctcac 120
 aatagtgacg tctttcagct ttagaaccgt gtacatccgg gttatatggg tctccagcaa 180
 cccgtgtgtt tctgtggagg cactgatagg gaacgggtgg tcagactcgc tcaacttagtt 240
 gacacatctg aattgcgaag atcgatgctg aggtttgttaa acattggatt gctcgtgtcca 300
 gactcgatta tttacagaca gccgccatgt acctggaata ttgctgagtg cggcggtaaa 360
 caacaaacta gtcagactaa cttttcactg tttataatga tggctcgaac ctgagcaacta 420
 tgtcccaagt tggcgaaact ctgggaaggga atttcaaatg aaaagaacaa tctttcacgt 480
 ctattggtat cagcgtcctg gagaagaaca tgatgttcac ggcgttactt cctcttacct 540
 gttttacttg tcccacgtt tcttcataatt taaagagtat ttgggtatta gagctttggt 600
 gctgttcaaa tgctactcaa ctgttcagtg cgggacaccg cgcttgttta cacattaagt 660
 tttgtttgtt ggttggtttg tgtgtgtgtg tgtatgtgtg tgtgtgtgtg tgtgtgtgta 720
 tgtgtgtgtg tgtgtatcta tgtctatgtg tctgtgtctg tgtgtctgtc tatgtgtgtg 780
 tgtgtctgtg tctatgtgtg tgtctgcgtg tgtgtctgtg tccgtatgtg gctgtgtcta 840
 tgtgtgtgtg tgtctgtgtt tatgtgtgta tatgcgtgtg tgtctgtgtc cgtatgtggt 900
 tgtgtctatg tgtgtgacat gcaatacatg ctgtgatact cactagctgc gtctatcgac 960
 cag

<210> 122
 <211> 650
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 122
 gtaagagcgg ggtaggatg ggttggtagg ggttgggttg tttctattact tcccgcttca 60
 cttgtatgaa atggataacc ttggtgtgcat cccaattgcg tgatcgattc tctttcgatt 120
 cactcgtgag attagactgc ctattttact atagtagtta gaatgttgct cagtgcgccg 180
 ttaaaacact aatacacaaa accgcatttg ttttatatgg tcaactctact gttttcacg 240
 tataatgtat ttccgactca ctggttggtg cgtaccattc tactgtcaca ctgagagcca 300
 atgttctcag atgtgtgaaa tgtttgaaag cgttttctac ataatttgc aggaatacca 360
 ttgtagaatg tagtcaacaa ggtaacaatc tgttagtgag cccagttcga ggttgcgttg 420
 taggggtgat tccaacaggt aggcagctcca taagcatagt ttttaagcat tttagatcat 480
 ctataaataa ccacatggtt agccgctatg tttagtttaa tccagtaataa gtagaactcg 540
 ttatatcttg aagggaagtg agtaaatcct tattccttga ctaccattata atagattttcc 600
 caatgactcc attcaactcc taactttcac atcactgtgc tcttcaacag 650

<210> 123
 <211> 583
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 123
 gtgagtacga caggcatttc tagtaaaaaa ctacttttgg taaaagggtc gagaaatcac 60
 ttgaagcaac aacatgattt tgtaacgcct attacacagt aacatgtcac acccggtgat 120
 gccgttttaa ggacatgcct ctgttaaatga aaggggttaag tacatgtgta tggggatggg 180
 atgggagcca cctgtcccaa tttcataggt cctcaggatc ccagttgcgt aggaatcccc 240
 tgattaatgc ctttgtgaatt cctcctgtaa ttgtcctggc ccaaattttt acaaaaccgc 300
 cccgatatac ctgggaaata attgggccta aggggtggggc ttttaaggac caagaacca 360
 accataaacc caacccattt tttcccaccc attccaggtt ttgttttacc taataaaaaa 420
 gtttccactt tgagggaacc ctttaagggt cgttttttgc gtttttttgc ttttctggga 480
 attccaattc cgggggaaca aaatacatat atttcacaga cttttgtgtc aattttatata 540
 atttccgact tcatgtcata ggtttgtctt tcttctcaca cag 583

<210> 124
 <211> 475
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 124
 gtgaggagaa ggccccaggc tagcagggca atggatgaag gaaatagggg caaaggggaat 60
 agcagttaca ccatacgacat ttccaacctc ctccagaact aatatatagc cttaatacaa 120
 ccagccaaga ctcaacgggc agcgggggtg gggggatttg gtggtcgctg ttccagacca 180
 ggggtgcaaaa tatcagtcgc caaatcaaca tggttcgctg cagacactga cacagcagtc 240
 attgaacctg cagaccctca acaggaaaat ggggcagata cgatcaaga cagtgtaaaa 300
 tagggataag taggcatatg caaccacctg atggaaatga aaaggggtga gtttaaaccc 360
 cggctaccaa aggtccaatg gttccttaac ccagcttacg ctatccctct aatttcagta 420
 ttgagctgat ttctgtcgag ttcatgtaaa ctgtatactt tctgtattat tacag 475

<210> 125
 <211> 1002
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 125
 gtaagggatc tcaagtcctg cagagtgagt gaggtagtga gtgagtggcc agcaactgaa 60
 gctaggccgc cctactgggg atcacaggga atgtatgtca atgggtgaag aaaggagcag 120
 tgggtttcaa cgcgcgcttc aaagtcattg cagtttctca gcgcatttgt cgcgcgtgtg 180
 tatctgtgtg cgcgcgtgtg tgcttgctgt cgtgtgagt agtcgccttg tgcatttgtta 240
 ctacacacaga ctaatgctggt ttctagagag cctactgata aatgtttaca ttaagatctt 300
 tacagtatac tgagattcga gccacagaca gcggaacacc aggcagggtta acaacaaata 360
 acgctcttcc acacaaccca cgcagcctaa agtggctctg ataggctgat accggtgtat 420
 tcttagaact tgtaatttgt gctttgccat aatacatgta cttcagttaa ctgtaataca 480
 gcataagact ggaccgggtt ttacgacgca atgagcaata attactctac gaaaagattt 540
 ggttagacat attcaataat tgtaacattc attaaccaatg aacaccagct gactctctgt 600
 ttgtgtcaac gtattcataa tcatctctat gcactgttta gctcagatat tttgatgttt 660
 caagagattt gtacgaacgt atgggctggg gccccatgaa attacataca atgaattcag 720
 gtgaaatacc tggcgagaca ataagatctt actagtctg ccacttcagt atgggtgtccc 780
 cgatggtgtc ttgtgtatgt gtgtgtttgg cgtcagttgt tactggaaaa gtcagctcta 840
 attatgtctt tatgtgtgta aagaccocat aacctagatg tctgggttta acttaacatg 900
 atagtaacag tcggctgtat agcctgacgc ttaaacgtta gatgaataag gactatatgt 960
 tttgtataaa catttctata acctctcttc tatatccta ag 1002

<210> 126
 <211> 597
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 126
 gtgagtcacg ttctctgatg gtcacgagtc acgttctctg atggtcacga gtcacgttct 60
 ctgagtgctca cgagtcacgt ttctctgatgg tcacgagtc cattctctga tggtcacgag 120
 tcacattctc tgttgagtga agtctcagta ccatttattt ctcttacctt ctctcaacca 180
 ggggtttcag cgtggatggt ctgagaagtt agcgcaaatc tatattgaag tcatttttct 240
 atcatataac catcggtata tccacgtgctg aaagtgttca ttaattattt ttattttcat 300
 ttatgaaggt ctaaaagaaa atatgtattg ttggaaacta tattcgaagg tgaaggcaac 360
 acgagtgatg taatatcttc aatatcaatg tacgctctgt cagcacctgt ttaaccagga 420
 actacacctt tagcgtaaca aaatatcagc tgatgatttc gaagcggact ataccctcag 480
 cactgttttt gtgtgtgtat ttatgtgtgc atgtgtgtgc gtgctgtcgt ggtgtgtgtg 540
 gtcctacgta tgttgatatt ttgttctgac tgtatatgtt cgtgcttacc attgaag 597

<210> 127
 <211> 689
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 127
 gtatgtatga ttctaataat gaatgttttt acctccgggt taaacaatat tttagtatta 60
 cgaaaggaga agtacctcga gaggtcttagg tctcagatgt ttagaaaccc atgaagacag 120
 gatagcttct gaaaaacaaa gtaacatcat gaggcataag ttcagattca aaccatcgta 180
 gttcgaatcc agcatgcaaa gggccctaac cctgtagatg gcgctgcttg aaacagagta 240
 gtcctgttcag ggtcagbact gtccccacaa acatcatagt cagggtcagt actgtcccca 300
 caaacatcat agtcagggtc agtactgtcc ccacaaacat cacagtcagg gtttaatttg 360
 gattcgggtt cgaatgcgaa gaagacagtc acgcccgtac actggaccga gggtgccgag 420
 aaagctcggt atattgtctgg aatactgccc agtaaaacca tcattttatt taggctattt 480
 attacgaaaa ataataat atagagaat gcataatgac gctgtttgaa tgtaaaaatt 540
 agaatggggt tgggagtggt cactattttt tcatcaaaat ttcattgtatt ttaacgcgac 600
 gacgctgaag acaaacctac gttaatcagg cagttcattc atatctgata gggaaattatg 660
 gttgttaacc aacgctacat tgtgtccag 689

<210> 128
 <211> 846
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 128
 gtaaatggcc attgtataca tgcattcatt tggactttga gtgagtgagt ggatgcgtat 60
 tcagtaagt agagtgtgag tgggtattag gtctgtgagt ggggtgggtga gtggatgggt 120
 gagtaagagt ggggtgggtga gaaagttagt gactcacttg gtgggtgcgt tagtggagac 180
 gtgattgagt gggatgggagg taggtgagtg agtgaatttg tggggggggt agtgaggtta 240
 acgctgttct gctgttcaat cacaccacat gttgccagct tactgtgcag gacgaatcca 300
 ggggtgtgtt aaattttata tgtttatata taacgtagtga cgtgtctgga tggggcgag 360
 gtgtcaagag aattatgcgg ctttgtgctg ctccgcgtat ttattgcacg gcggttggtta 420
 cgcggttgat aaagtatgtc aaaacatttc ccagccatct ttgtctgttg tgaacaccta 480
 ctcccagacc atccatttca atattgtgtc gcgttcattg agttatacat gttaaactgt 540
 agagcgcaga tgagcacact tgagcatttc ttacagtaaa cagaatgtgt atatttcaaa 600
 atttaccaaa tgcaatatca tcaagcaaat tatgcagctc tatagtaaca tcggagtcgaa 660
 tgggtccagt tgccctcggc tgccattccg acctcccttg ccagaataca ccccggtcag 720
 gatcagttat cctgcagaag gcacgggtgc gaatgaaac ataaacacat agtcgcttag 780
 tagtatgctg atttaggacg gcaaaatccg aatgtgaatt actgtgaatt gcattacctg 840
 ttacag 846

<210> 129
 <211> 474
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 129
 gtaagtagct acctgtttat tcaatttttt cgctttgcca atcaattcat tcagcttgaa 60
 attcaataat tgtgtttttg atggctgaaa accaatttga actcttttct tttctcaggt 120
 cgaactcaaa taaataatca ctaattgtta tgcacgcggg tagggcatat atactatct 180
 cacatcggtc attccaaaat gcaaaacaaat tgtcttattt ccgttgggag aagcaaaccc 240
 cctttcctgt aatcttgctt ttggcatcca ctggaaattaa tgttgactcg taattgatac 300
 tggctctctt cttgcataga gttatattct atagtttga aatctttatg attttgctat 360
 ttatatcttg acagcatgct atagacaccc tagactattg tatagcact tgtattgttt 420
 ttccatttat tattttataac agaacatggc ttgtaatttt tatttacctt ccag 474

<210> 130
 <211> 290
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 130
 gtgagaacat tgataatagt tcaaatgaag tatatccgat tcaagctgtc gatacaagat 60
 gagatcacata atcacaaatgt ttgtattaga tatctctctt aatttaaatgc cgctttttatc 120
 aatattctgag caatctcttca gcaacatata ccagcaaatg tttcatcaac agactatatt 180
 atttaaatatt ttaaaaatcc ttctctgttg ttataaatatc ttaaagatgc gaattccttg 240
 aatggtctct ctctgcagca tatagttaag ttgttgtgtt ttctgtgtcag 290

<210> 131
 <211> 298
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 131
 gtaagaaaagt ttcactgtct aaatcttttt ttatgataga gggtagagaa gtggagacaa 60
 tgtgacaata tattgaataa agttgtttta aatttataac tctcataagt tcatattatg 120
 ctgaaatgt agccatctat aactgtgtta catgaaatgt taagacatta acctaaatc 180
 ttcacgtgat aacaaaacaa tgttaataca tgcgtcaatg taacattttc ttatcttttag 240
 gttatagcat aaacacttca gagatacagt gacgaaaacc tctattttaa tatttcag 298

<210> 132
 <211> 189
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 132
 gtaagtagta aactgctcag attgttttca taattactcc actattaagt aaaaagtact 60
 agtaattcaa tagtactgtt cacagagaaa tgtaacacaa tagaccacag agtccatttg 120
 ttaaacgcct ttgctgttgt aagtctgaga ttttggtgac tgatggaaag ctaaaaata 180
 ttttgacag 189

<210> 133
 <211> 821
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 133
 gtatatttaa gtattttatc ttacgcatga cctcgaccct atttattttt ttttaactct 60
 cggatttgggt taatcctgtt accagcgaag gtccgggtta gaattgatct tcagtcacact 120
 attcttctgct taggactaac gagttgtctg gctgtgttac tccggttgaca cgtgtcaacg 180
 gatcccaatt gcaattagat cgaatgctcat gctgttgatc cctggattgc ctggtccgga 240
 ctccacatac cgcgcgcatc ttgctggtat attgtcgaat gcgacgctaa acagcaaacg 300
 aaccacaatc actgagacct ggtggtacat gtcagttctc tattgctggg gttccaaaca 360
 tagccatcag ttgaaatatt tcatacatag aagaataacc ctgaatatga tgatgaaaca 420
 tttacttaga tctgcctctg agccccaggc aaaaatgcac actgcacagag 480
 gataggcat tcttgggagt actgtatagt tagttgcata catattagcg ttccctcaact 540
 aaaaacgaatc tctgaatgct atcaaatata gatcatgat ctttgattgt gtcactgtga 600
 tttaaaatgg ttgtaagatt tgcaattaca atatacacia acacggttcc tgcactctgg 660
 agaatgcaat ctttcgttgt acgcgtctgt tttcatattt ttatgcatgt agtttgcact 720
 acttagcgtc caataaatcc attcacaata tcacacaaac aacgatttt aggaatgtga 780
 ctgtagctgc aacgaatata cctgatcctt tcttgttcca g 821

<210> 134
 <211> 866
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 134
 gtgagagaac cagtaatagc tactgtctac aaagaatgtg ttcattttaa gacctgactg 60
 tagggcgcgat gctgtctgta tctcctccgc ctccctccctc tgttctcctc ccgaaggggg 120
 cagcttcagg ttctcttggc aatatgccaa gcagacctcc tgacaggcca gtatatatac 180
 gtaagggaag caagtatgga ccatcgcgcg gcattgtagag atacaatgat cagctgtctg 240

```

ctgttccact cctgtcagac aatgagataa acatgaatac agtattactc agcagcgcttc 300
caattttcaa cctctgtatt tattaaaaaa aggaattttt aatatatttt tctccttggt 360
gaaatatttt agtaactggtt aatcgatata gtagcgagta gtgacgcttt atttcgggttc 420
attctcgaaa caaaaaata atagtcacat gaactctctt aaattgtttt tacaaccttc 480
aactgccaca gacgtaatcc ctacagttat tttagctgta caacgtgttg aattgagtg 540
gttcgcgaatt ctaaaataagc atgtatataa ttacgcttca tgcaagtaat atattgttaa 600
ctgatgcagt caactgggtga ccactgattt agttcctttg tcataaattgc agttctgtgt 660
gtcacgggga cgggtgggaa gccaggttcc tctgttcacg ctgaataatcc cgttcogaac 720
ccccacatgg gtacaaaagtg tgatgcctat tcttggtgtc cccacacgtg atattgtgtg 780
aataagtggc ttaataccat atacactcac tctattgtca cactactgcc accggctcac 840
acctctgatg cttctgttct atccag

```

<210> 135

<211> 785

<212> DNA

<213> *Haliotis tuberculata*

<400> 135

```

gtaattaatg gatgtgaagt caatgtccga gggatataa aggattttaa tacttcagtc 60
gtgtaatact gtatgacatg tgtattggat ggtgtaggta ttacagggtta taaggccagt 120
gtgtgttggg acgggtactt tctgtcacta gtaataagca ttgtatttag ctagctttta 180
tcataataac ttatgttcat ggtttgtggc aattgaaatc gaaattttct tcatattcaa 240
gggttaacga ctggtgtgtt agaatagtta ctatgctgca ttgagaataa cactatagta 300
ataaagcata tcatacagta agaataacac tatagtaata aagtatatca tacagtaaga 360
atgtcatgtg atgataaata ggtttatcac ctggtgtgtt ttagaatggt tactatccca 420
ggaataacca ctatgtatta catgtatat gggcagtgta agtagtagca ttgtatatata 480
aatcagataa ctgtgtttca aaacaccagg atatatgggg tatacagtgag gcagtgtaag 540
tagcaacatt gtatatataa tcagtatatc gtacttcaaa acaccaggat tatgggggat 600
acagtgggca gtgtaagtag tagcattgta tattaaatca gtatatcgta cttcaaaaaa 660
ccagatataa attcagataa tcgtgttcca aaacaccagg atataatcca gtatatcgtg 720
cttcaaaaaa ccagatataa tgggatatac agtgcggggt tgcatataac cttccacctt 785
taccag

```

<210> 136

<211> 378

<212> DNA

<213> *Haliotis tuberculata*

<400> 136

```

gtcagtttag totctgtct gagctaacga taccaatttc ctattttcga gaaccacgat 60
gacgagaaaa gaacgaatat agatatagat gcagtataga tcaagttaat gaattcattg 120
ctatattggtt cctgttaata aactttaaga aaacgagagc atgcacacaa atgaacaaaa 180
caattatgtg ttatgtagga atatgatata tgtatttggg ggctgacgtg agcagggttg 240
aagggaacgt ttacattgtc agtaaacactg ggagtattct ttgattccaa atatatcagt 300
tcattgtgtt cagcagttac aactaacatt atatcatata ttacgtogta acatgtcttc 360
ttgtcctctt tctgccag

```

<210> 137

<211> 398

<212> DNA

<213> *Haliotis tuberculata*

<400> 137

```

gtatgttatc ttattatcaa atgtgtaatc agatactgga gacgttttca tattaacttg 60
gtcagattta gttgatgatt ttgggtcgat attgaacgaca aggagtttaag cattaacacg 120
ttcaacacat ctttaactctg atatgagaag ggaataaatt gatccagatg tgatgattga 180
agtttagatta acagtgaag atataccagt ttgtataatc gatataaaa gtacgagaat 240
tgatcgttga aaactaaatg tgggaaggcg aacgcacagc agattttaga ttacgatcgt 300
gtgtcagaat aattccaat aaaccagacg tcggaataatg ggttgctcat ggcaatagtc 360
acgatattat gctaacatgc acgatattac tatttcag

```

<210> 138
 <211> 522
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 138
 gtgagataag aaacccttct aacagtaata cgacaccaca ttacagctta aacatgattg 60
 ccacgcgatgt ttctcatgtgt agtatacgct ttctcagttct acataatttt gtttttcaaa 120
 tcaagttttag caaatgaatc tatcactgga aaatagggtta gggtagccaa gtggttaaag 180
 cggctactgta tcacgccaaa gacgagtgct ctaacctgca tgggtacaaa agtgaagacc 240
 attgctgggt tctaccgcgc taatatgtgt tttagtattg ctaaaaacta tactcaccaca 300
 tgcgcgtgtaa aagtgggaata ataactatct ttcaacaaaa gcacaaaaacc atttcatattt 360
 catgaaagcc tcttgtttcac ctgaaagacg caagagaaca atagttccta acattatttt 420
 cagacattgg aaatgtcctg cactgtgtaa ccatatatcc ttgaaaattt ttacgactgc 480
 atcgatatca atttatgata taaattttaa accttatttc ag 522

<210> 139
 <211> 673
 <212> DNA
 <213> *Megathura crenulata*

<400> 139
 gttttgtaat aattatgtag aattctttac ctccagaataa gatgagggtca catggggtttt 60
 gcacaaactat tacgtttcgaa ttaattattaa taataccgga cctccactgc gtacatattt 120
 atctttataa cgataaatgc gatgatgatg atgatgatga tgatgatgat gatgatgata 180
 atgatgatgc cggatattgca cgtaatccag ccgacttaga tgacaccccta aggggtgcaga 240
 aagtataaca attagattgc gtttgcattc gtgtatgcgt gtgctttaac caaaagtcac 300
 aataaaaagt caaaccccta gtttattcat ttgatagagc cttttacgat aagaacaatg 360
 taataaataa gaacataact gaaacctccg aaagaaggcc tggtttgtcaa gagaggtatc 420
 gacatgattg acttataaac ctgtgcttct atattttgga actgtccact ttcttgttgt 480
 gtgtactgta atcacatcgc actatggctg caagacgtgt acgagtacac tatataactta 540
 cctaagtacc aaccacaagg ctggctttgt taatatgttt atttcacaga aataaacaca 600
 gaattccagc atttgctggtg tgtatttagc aaaaacccga tatgacactc atgtttttatt 660
 acattttttt cag 673

<210> 140
 <211> 273
 <212> DNA
 <213> *Megathura crenulata*

<400> 140
 gtactgttta tatgttttcca atattgccga taccttcaat atatatactt tatcaaaagta 60
 atgtatgaat ctgaagtaat ttctctttcc agtagagatt cagttgatac aacaagaatt 120
 cgccctgttg tatgtcactt tattttcattc aaacgattcg aagtgaagctg tccatgccac 180
 aatggggctc ctgtaacttt ctgtagtggt gtagatgata tatagacgtg gcgacaccta 240
 cgtataacta atatttgtgt aatgtcgttt cag 273

<210> 141
 <211> 241
 <212> DNA
 <213> *Megathura crenulata*

<400> 141
 gtaactattt tgtcactgta accaacaact gcagcttatt ttgcaattac gataataaca 60
 atttttgaaa tatatcttta ttaaagcaaa ggtttctaga gacaacacgc cggtctcaat 120
 tattttttcg aacttacgct tgagtaaaga tctgcaaatg gcaaccctac ctatactatt 180
 aaaaataata tggtacattc gtatctgaat gtttaataaa tcacttcata ttctgttgca 240
 g 241

<210> 142
 <211> 327
 <212> DNA
 <213> Megathura crenulata

<400> 142
 gtaagtatac acacattatt tctcttctgc tatatcagat gaagagaacg ttgtatcact 60
 aaacctagctc tgtttgattt gtggtttcgt ttgcttcctg aacagtaggg ttgattttaac 120
 ttctctgtgtt cgtctgtacc aatgaaagac tatgatgctt gtgtgaagat gctttgttca 180
 tgagtcagtc tgttcttgta atgctttgat ctttgccatc aacattcttg aaattaatta 240
 tgggtttccct taaatactta catattacat ttaaacytgc ctgcttgctc gattgcatat 300
 tctttcaaaa ataactatat attccag 327

<210> 143
 <211> 958
 <212> DNA
 <213> Megathura crenulata

<220>
 <221> misc_feature
 <222> (584)..(584)
 <223> "n" is a, g, c, t

<220>
 <221> misc_feature
 <222> (596)..(596)
 <223> "n" is a, g, c, t

<400> 143
 gtaaatatac agtgaaatcc ggataagtaa aatccagata agaaaaaaaa ctttttctgt 60
 ggtcccgcca tgtttcttct tcacttatca ttattttgat acggataagt aaaaaatcgcc 120
 tgagtaaaac atccgggtgaa gtaaaatgat ttctcgaggtc tcttcacggt ataagtaaga 180
 tacacaagtg atcattccaa taaacactaa ctgatgcaac acaataccag ccacacagtg 240
 ttctactacg tttgtttgtt ttgtaattaa caattaacac ttaagtgttt cccaatgtgt 300
 ccgtgtgcac actgattggg acaaaagcttg caacaagccc ggcaattcca tgtcgtttat 360
 gtctacgttt tttattctga ctgcttgagg ggggttcggaa aaaaaataaaa aacgggtgaaa 420
 tattataaaa aattcacggt gccttgaaat tttaggtgtc cggatttca ttagatgat 480
 taatttctca ctgtgaaaca aaaggacccc agtaccctca ttctgtacgt acgtataaaa 540
 atgttaattt aaaaagccca ttatcatggt atacgtgatc ttgntttgca attatnctac 600
 cgctttcttg attttttaa gcaatttctc ctctcatgaa cttaataaca tagcactcct 660
 gcaaaaagaaa acagtcactg catggatcca tattgaaagt tgcgtgctat ttctcatttt 720
 attactcaca gatatttcaa gaacatcgta ctctcaaac aggcataaagc aaagaggggt 780
 acatttttag cgacaaggtc actagctgag tggaaacagc atatattaat ggagatgact 840
 ctgggtcatga tgattaggac aattatcatg acgttatcat tgatcatgac catgtcagta 900
 taatagatag ctaacaaata atgtaattac taattatgaa gcaatgggtgc atttgcag 958

<210> 144
 <211> 868
 <212> DNA
 <213> Megathura crenulata

<400> 144
 gctcgggtga gttattaaaa gaacaaaaat atttaccatt accattgtta actacaaaaa 60
 tgagttagat atcttatatc actggtacac tactgatatt ttatgcaatg aaattactat 120
 ttttccaggt acggttcaac cctccccc ccccccccc ccccccccc ccccccccc 180
 cccatcatgc ttttctgtaa aacataaaac accaattaac aatgttctta gtgtgtttgt 240
 tgactccctt ccactgcaac gcctacataa tcaagtgttt cgtttttttt caaatcttcc 300
 agttagttgt gaagactaaa agttaaata agcattcaca taactcttaa gagcaactgg 360
 gaccatcgag ttacgtattg atatttctgt gagagtgaag caaaacactg tttttcaagc 420
 ttaggtttat caatcaaat gtccaatagt tcatgttcat gaaaaggcag cgaaggataa 480
 gagggtccga gacatcttgt ctattctcgt gttcatatga tatcaactga ggagcttcca 540


```

ttacattttt gaccttatca tttaaagaca tacatggaac attttcattt tacagttaaa 600
gtgaaccact tcagggttcaa ctccaacttc gaattcaact tctgtgtgtg gttttatgag 660
ccgactgaaa tagagtgcct tactttcact tctagtttcg ttctgtctcg tcactcgtgt 720
ttcttttcagt gtgcatagta cagcctcagt atagaacaca cgaacttgct ctactttaat 780
agattctgaa actattatgt ggaagttgg caggctatag taacatcctg gcaaaaattat 840
catgtatcct cttgtttgtc ataattag

```

<210> 145

<211> 1766

<212> DNA

<213> Megathura crenulata

<400> 145

```

gtatgtattt cccactgggt gtcgctgact gccaacacat acttgtaatt tattcatgaa 60
agtataatag tttgtttgaa agtatattta taaccatctt gcacaagcgt cacgaatttt 120
caccacaaag cttcaaaacat cccaaaacat tctaatagcy atatatattgt taaaagacca 180
aaatatagcc ttacaacaat agattatttt aataagacca gtcagtgcgt gcaaatcgat 240
tggaactctt gaaataaaat attctatgta ctaactgcca atctcataat acttgccctg 300
gatgtgcttc tttttcacat tcgcgtcgag ctccaactcc aatgcataag cttaaaaata 360
atcataaaca caaacaataa gccacagagg cgacgatccc tccaggccag gctttatttg 420
tctcttatag aatatatcgc tattagaatg ttttgcagct tttgaagctt tgtgggtgaa 480
aattcgtgat gtttatgcgt ggtatttatg taagatgaaa ataaatatat cttttcaaac 540
aagattttag tattttgaa agtcttatga ataaattaca cttagtgttt aggttatgtg 600
tcaactgagc cttgtggtat ttccctctct tcaatttgtt tgttctttgt tcaatttcga 660
atagtatcct tactgtggat agtctatatg agaactcgtt aaagaataat acaattctaa 720
tggaattgaa cttctttaac ttttatttgc aactgccacg ttcggtata cgttcttatg 780
ccgtcatcaa gcatacaggt gtacatgtat gccaaaacgc tgcaataaaa aatataagaa 840
gttgcaatcc ataaagattt caatgttctt tcatcatcac atcaactctt aaaaatgcct 900
ataaaaacat caacaaacat acaatagtac attaccggat ctgcagcat gccacgtcg 960
atatctaacc aatatcacta tccatttaata ggatcaagag taggtacaga catgttcagt 1020
tataaatact cttcaaaaaa gtaggggaac ttggaatttc aaggtcaata acaactcaat 1080
gataataaca attgtgtcca aataataaca attgtgtcca aactaatgtt atctttacaa 1140
agaagaaatt gagtgaacaa ttaccccggt attttattac ctataacggt ttctcttgct 1200
ttatggtgct tgaaagaaga aatgggtgaa aaacggaatt tgacattttt gcgtcagttg 1260
tgcttaatgc cccatttgtt ggccaaacac tgattgatc gctgaggtat cgtgcatacg 1320
cgtctaccta ttgtaatttg atgcagctcg tcccattctt ccaccaacgc ctggacaagt 1380
tcatctagcy tggctggttg cctttcacgt tgacgcacac gtcggcccaa gatgtcccag 1440
acattttcaa tggccaggcg tcattgctgg tcagggcacg ctatggatac tgtgccgttg 1500
aaggtgggta cgttgttccat attgaaattc caagtctccc tactcttttt aagaggaggt 1560
tcacaagata tggcttttca tgttggtgaa gagaatatca aggtcttcta aggcatttgt 1620
tctttataaa tttgatttta agaagtttga tattatctgc atccttccca agaaattgca 1680
aatgttcaca cactattgcy ttgtataatg tttttgggga aataaactgt ccaggactgc 1740
taaatagtaa ttttgcctac ttttag

```

<210> 146

<211> 1049

<212> DNA

<213> Megathura crenulata

<220>

<221> misc_feature

<222> (290)..(318)

<223> "n" is a, g, c, t

<400> 146

```

gtgagttcac gtaagcctac gagatcaaca ttactcctta acagccacg catcatgtac 60
cgatatatca caacaaaag tattcaaaag ttaaacacg atagtgtatg ttcaagaatg 120
acatatttaa acaaggacat gagtctgaaa taacacgtac ttgacacggt tgtggtcaga 180
gttttgtttc tcaattggtga acctgtgaaa caacctttca aaccaaaaag tgcctattaa 240
tattgttaat tcccatgaat tagggagata acacattcta ctgtcatttn nnnnnnnnn 300
nnnnnnnnnn nnnnnnnnaa taaccgcttc cagcatgaaa acacataatg attatctcaa 360

```

ttctaccatt	actaattata	attttgactg	gcattatttg	acgacgcgta	aaacatcgct	420
gctttacaga	ctgcactgcg	gtaactgtga	cgttttcatg	acgtcactac	attctattca	480
aaacatttcc	acagaagagc	gagaccacgg	cogtgcattg	ttctgggcag	atgattaccc	540
aagtatatat	ttataataac	tgactcgtct	gcttgaataa	tggtgacaca	tgacaacgaa	600
tttggatagc	cgtaagaagc	gtgaataactg	tgaatagtgt	gaggggtgtt	tgctgagagt	660
taaccaccgt	taattgcgaa	attcccgaaat	acttgcattt	gcagtcgaag	aagaattgca	720
ttcttactcc	ctcattgtta	tttagcagcg	gttattgagg	ttttgatcac		780
ctctaaatag	acaatcagga	tcggcgaaac	cggaataata	tagcagaatc	tgtaattcaa	840
gatggcgctg	ccctgtgaaa	tatgctgcga	gttcagtaac	acttttccct	ttgatcatg	900
gctctgtttg	ctctgaatct	ggtctttcag	aggatccctg	cttttttaaa	actaaagtcc	960
tccaacatac	cttatattta	tgttttttaa	ttatttatag	ttttaatatg	aacaacaaat	1020
catattttat	tacacattat	atttttcag				1049

<210> 147

<211> 1846

<212> DNA

<213> Megathura crenulata

<400> 147

gtattttaaa	aagtaataaa	accatatttt	cgaatgcgct	ttatgaaaaa	tcgtgtgact	60
gggtctcttag	tttacaatgga	gtgtaacaac	atgtcccatc	agttgacata	tactgtctac	120
acaaagtaag	ggatatttga	taatgataac	aaatataatc	aaagcgggta	tactatcaag	180
actttattcac	ataattacag	gtgaagggag	gtgtgatcgt	gttcactgat	caggttgagg	240
ccagagaaagt	cccagtttga	gtcttgcaga	agatgatgtt	taggcattgg	gtcgaatcac	300
caaaaataca	tgacttcaat	aacggggttg	accacctcga	gcgacgatgc	aagcagtaga	360
gcgtctacgc	atgctcctga	taaggcgacc	aatctgttcc	tgggggaata	gtcgccactc	420
ctctctgtagt	gccacgctca	ttctctgtac	ggctctgggt	acctgctatc	gggtcttgat	480
ccgatatccca	aggatattccc	acacatgttc	aaggtgagag	gtcggggaac	atcgctggcc	540
acggtaaagt	ctgaatttct	tgccgttgaa	agtgcgtct	gacacatctg	gcaggtgtga	600
ctctgacggt	gtcgtcctga	aagatgaatc	cagctccatg	acagcggaga	aaggcgacga	660
cgtgtgtggt	aatgcagttg	ctctctgcag	acacacctgt	cactcgccac	tcacaagcgt	720
gtagatctgt	acgacagatc	atggagatcc	cagccacatc	cataacggga	ccctatccat	780
accgatcatg	agccaccata	gcagcgtctt	gatgacgttc	tcctctgtcg	ctcgacatcc	840
tcacacgctc	aaaaggaacg	tggaactcgt	actgaacatg	acattagcag	acctggcagt	900
tgctccaccg	tgatgttggt	gagaccattc	cagtcgagct	cttcggtgtc	tggtcttcat	960
cgataaacac	acgtaaggtg	tgccggcgct	caagacggct	ctatgcaggc	gatttcggat	1020
tgctgtgggt	ctaactctga	tcccagggtc	ctgctgaagt	tgatgtctga	ctctgtgtgc	1080
attgagatga	cgattctctta	ggactgtgga	gatgatgaat	cgatcttgac	ttatgggtgt	1140
gacattagga	cgtcggggtc	gtgtcctatc	ctgcactctt	ccagttgttc	ggtagcgtct	1200
tggtaccocg	ctgattactg	actgagaata	tccactctgc	gtgcgacatg	agcctgtgtt	1260
ggccaccgct	gaagcattgc	aatgcccaga	gacgctcttc	aaaagtctat	cgacgcattg	1320
ttttctgttc	acaaatgaca	cggtaaaaaa	gtttttgggt	cttttatgct	tcocaaagag	1380
atgaaaaaaa	cgttctctatg	gtcgtgcaca	ccttacaatg	caagtggtgaa	aagtgaactg	1440
caccctcttg	tggtgttcga	tgacacactc	gtttacgtta	tgatgcgatt	tgccgtctaa	1500
acatgttttg	gtgtcttaac	atgttttctc	gcattgattca	tataactatt	tgctcatatt	1560
ctggcatcaa	accaaactac	agtgaaaata	atttcaatct	ccctactctt	gtgtgagtag	1620
tatatagcac	tcgacagaca	atatagacaa	tgacgtttac	cogtcaacaa	tcctcagtcac	1680
taattatgtg	gacacttcca	cacatagtgt	cagtgattgt	aattcaactg	tacacacttt	1740
tcocgtgaac	attcaggatc	tatatgacta	aatatataac	attagatata	gtgcagtttt	1800
gtatcgctac	gacattgttg	taactctttg	tttaatcatt	taacag		1846

<210> 148

<211> 166

<212> DNA

<213> Megathura crenulata

<400> 148

gtatgtttta	aatgtcactt	atccgtgata	tgtaaatgag	ttagcaattc	actttatcaa	60
ctgttttggt	gtactgtttc	agtgccaggt	ttacttaggt	tggttaatt	aaaatattca	120
agctcataaa	tgttttgatt	caacttttgt	tatttatctc	aaacag		166

<210> 149
 <211> 726
 <212> DNA
 <213> Megathura crenulata

<220>
 <221> misc_feature
 <222> (388)..(388)
 <223> "n" is a, g, c, t

<400> 149
 gttataaagc agtatattct cttcaaaaaa gtgggggaac ttggaatttc aaggtaata 60
 acataactac cttcaacggc acaatatcca tatgatgcc cggccagcaa tgaggcctga 120
 tcttttcccc attaaaaatg tctggaacat cttgggcaaa cgtgtgcgtc aacgtaaaaac 180
 gccaccagtc acgctagatg aacttgcca ggcgttggtg gaagaatggg acagactgca 240
 tcaattacca taagttagct catttgccgc gaatcagtc gtgtttgacc aataacgggg 300
 gcattacgca ctactgacgc aaaacaatgt caatttcctg ttcttaccga ttcttctttt 360
 caccgacctc aacagcaaga gaaactgntt aggtaatgaa ataccgggtga attattgtta 420
 actcgattcc ttctttgtta agatacaatt agtttgggac caattattat tatcattagt 480
 ttgttattga ccttgaaatt cgaagttcct ctacattttt taaggagttt atttgattga 540
 caatgaaatg taagaaaaga gcaaatcgta aaatcacgta aaaattattc cttaaacatc 600
 agtctctaac ttcatgttaa attgccagta acacgtgcta tatgatgttt ccgtttctct 660
 ttgtttttta gcattcaact tatttgatat aacgttttac tgtttttagat tcacatcaaa 720
 ctgcag 726

<210> 150
 <211> 383
 <212> DNA
 <213> Megathura crenulata

<400> 150
 gtatgtatct catgtttctc aaataatttg attttcaatg cccttactat aaagcacagt 60
 tattgttcac tgccagtaac cgtttattta cgtaaatgtt acaggctatt ataatacaaa 120
 atacattacc gatattgttt accacacaat tatatcattg tcaaaatcta cccccattac 180
 ctgcgttttg aatttgtaac cttctgacaa aaatgaatta gcaagagctc tgatgaagaa 240
 cataatgaac aacacctatc ttcttctctt caatgacggt ttaacaatac aatgcacaat 300
 gtaaaaaaat atatatatat atataatttt atattctacag ttaatgcaaa tgactccact 360
 aattcaggga aacacatttt cag 383

<210> 151
 <211> 306
 <212> DNA
 <213> Megathura crenulata

<400> 151
 gtaaaaaaaa acgtccagtc atcggaaacc cgcccagata tatgggtttt ttctatttta 60
 acaaaaaaag cagagacaaa aagattatta aaagtacat ttaacttgat atcagatcaa 120
 tagtttggtc agtttagtct ctatatccct caaatccttc gaattcttaa gctctgtgat 180
 attttgacaa acagagaaga cttagttagc cagacttttc cttatttttt cctgaaaaac 240
 ttaatacagg tattaaatgg attcattctg caacctacaa ccatagccca tatgttatta 300
 ttccag 306

<210> 152
 <211> 627
 <212> DNA
 <213> Megathura crenulata

<400> 152
 gtgagagaaa ctataatagt gtatgtcggc aaaaaatgtg ctcatatcat gactctgttg 60
 gcgggtgggt gctctcctct cctcctccac caccacgggt acctccacct gtcaggggcat 120
 caatgtacca tgaaaatgtc tacaatacta ggcctcctgt agaagacagt aagatttaca 180

tgcccggttt gtaactagtt taaagtgcct cacagtaacc aaaaccagtc tctaaagatt 240
 aatgtctggt taaaatttaa tgccacattt tcaactgaca tattcttgca attaagtaca 300
 aatgaagtag tataaaattat ccacaaatag cgtgatgcac cacaaatata aaccgagtag 360
 ttttttgcca ttccccactt gttctggcat gatcacatca tagatctcgt tcatgaagat 420
 actgttggtat gctttttccc aatatgcccc aatctgttaa attatttaca cgacgcgagt 480
 gtgtactttc atcactcaga tctttacaat gtgtttgtaa cgtttacaat tagcgttatg 540
 attgaaatcat taccocctgc tacgtttaat cacattcact cactcatctg atgtacttta 600
 caggtctcac cgatgatcac ggctcag 627

<210> 153

<211> 266

<212> DNA

<213> *Megathura crenulata*

<400> 153

gtcagtattc tccaatatgt ttgactagtg tcttgctcat gtatcaacta ttttaggcaa 60
 cgtttttgat tgttatggtt ttttcattgat atgattttat tgctacctct ataccctaac 120
 aaaaatgttt tatcaacaat tgtttgagtt ttaatgcaag aaaattatca ggagtagcgt 180
 gcaaaaatga ctggaaggca tgggtgtactt ctgtgtgtac atacaagtgg gtaatgcctt 240
 attgaactcg taatcactcg ttccag 266

<210> 154

<211> 266

<212> DNA

<213> *Megathura crenulata*

<400> 154

gtcagtattc tccaatatgt ttgactagtg tcttgctcat gtatcaacta ttttaggcaa 60
 cgtttttgat tgttatggtt ttttcattgat atgattttat tgctacctct ataccctaac 120
 aaaaatgttt tatcaacaat tgtttgagtt ttaatgcaag aaaattatca ggagtagcgt 180
 gcaaaaatga ctggaaggca tgggtgtactt ctgtgtgtac atacaagtgg gtaatgcctt 240
 attgaactcg taatcactcg ttccag 266

<210> 155

<211> 190

<212> DNA

<213> *Megathura crenulata*

<400> 155

gtatgttttg agatccacat aatctcttac cctgtctcat ttctaattgt ctccaatata 60
 caatttatat agcctttgag cttcagatgt attacggaca ggcattacag tatcatgata 120
 atatgggttt ctgctatttg caaaaattgt gtcctatctc tgttcagatc atcatggcgg 180
 tgacacctag 190

<210> 156

<211> 403

<212> PRT

<213> *Haliotis tuberculata*

<400> 156

Gly Leu Pro Tyr Trp Asp Trp Thr Gln His Leu Thr Gln Leu Pro Asp
 1 5 10 15
 Leu Val Ser Asp Pro Leu Phe Val Asp Pro Glu Gly Gly Lys Ala His
 20 25 30
 Asp Asn Ala Trp Tyr Arg Gly Asn Ile Lys Phe Glu Asn Lys Lys Thr
 35 40 45
 Ala Arg Ala Val Asp Asp Arg Leu Phe Glu Lys Val Gly Pro Gly Glu
 50 55 60

Asn Thr Arg Leu Phe Glu Gly Ile Leu Asp Ala Leu Glu Gln Asp Glu
 65 70 75 80
 Phe Cys Asn Phe Glu Ile Gln Phe Glu Leu Ala His Asn Ala Ile His
 85 90 95
 Tyr Leu Val Gly Gly Arg His Thr Tyr Ser Met Ser His Leu Glu Tyr
 100 105 110
 Thr Ser Tyr Asp Pro Leu Phe Phe Leu His His Ser Asn Thr Asp Arg
 115 120 125
 Ile Phe Ala Ile Trp Gln Arg Leu Gln Val Leu Arg Gly Lys Asp Pro
 130 135 140
 Asn Thr Ala Asp Cys Ala His Asn Leu Ile His Glu Pro Met Glu Pro
 145 150 155 160
 Phe Arg Arg Asp Ser Asn Pro Leu Asp Leu Thr Arg Glu Asn Ser Lys
 165 170 175
 Pro Ile Asp Ser Phe Asp Tyr Ala His Leu Gly Tyr Gln Tyr Asp Asp
 180 185 190
 Leu Thr Leu Asn Gly Met Thr Pro Glu Glu Leu Asn Ser Tyr Leu His
 195 200 205
 Glu Arg Ser Gly Lys Glu Gly Val Phe Ala Ser Phe Arg Leu Ser Gly
 210 215 220
 Phe Gly Gly Ser Ala Asn Val Val Val Tyr Ala Cys Arg Pro Ala His
 225 230 235 240
 Asp Glu Met Ala Val Asp Gln Cys Asp Lys Ala Gly Asp Phe Phe Val
 245 250 255
 Leu Gly Gly Pro Thr Glu Met Pro Trp Arg Phe Tyr Arg Ala Phe His
 260 265 270
 Phe Asp Val Thr Asp Ser Ile Asp Asn Ile Asp Lys Asp Arg His Gly
 275 280 285
 His Tyr Tyr Val Lys Ala Glu Leu Phe Ser Val Asn Gly Ser Ala Leu
 290 295 300
 Pro Asn Asp Leu Leu Pro Gln Pro Thr Ile Ser His Arg Pro Ala Arg
 305 310 315 320
 Gly His Val Asp Glu Ala Pro Ala Pro Ser Ser Asp Ala His Leu Ala
 325 330 335
 Val Arg Lys Asp Ile Asn His Leu Thr Arg Glu Glu Val Tyr Glu Leu
 340 345 350
 Arg Arg Ala Met Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
 355 360 365
 Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Phe Pro
 370 375 380

Glu Ala Thr Asn Arg Phe Ala Cys Cys Ile His Gly Met Ala Thr Phe
 385 390 395 400

Pro His Trp

<210> 157

<211> 973

<212> DNA

<213> *Haliotis tuberculata*

<220>

<223> Domain a, parts 1-4

<400> 157

ggtcttccgt actgggactg gacgcagcat ctgactcaac tccagatct ggtgtcagac 60
 ccttctgttg tcgaccgga agggaggaaag gcccatgaca acgcattgta tctgtggaac 120
 atcaagtttg agaataagaa gactgcaaga gctgttgacg atcgctttt cgagaaggtt 180
 ggaccaggag agaatacccg actctttgaa ggaattctcg atgctcttga acaggatgaa 240
 ttctgcaact tcgagatcca gtttgagttg gctcacaacg ctatccacta cctggttggtg 300
 ggccgtcaca cgtactccat gtctcatctc gactacacct cctacgacct cctcttcttc 360
 ctccatcact ccaacaccga cgcctctctc gccatctggc aacgtcttca ggtactcaga 420
 ggaaaggacc ccaacaccgc cgactgcgca cacaacctca tccatgagcc catggaaccg 480
 ttccgtcggtg actcgaaacc tcttgacctc accagggaaa actccaaacc aattgacagc 540
 tttgattatg cccaccttgg ctaccagtat gatgacttga cctcgaaagg tatgacccca 600
 gaggaattga actcatatct gcatgaacgg tcaggcaagg agggggtgtt cgcaagcttc 660
 cgactctcag gtttggcggg ctctgctaac gttgtgtgtc acgcatgccg tctctgccac 720
 gatgaaatgg ctgtgatca gtgcgacaaa gccggcgact tcttgtgtgt gggcggaacc 780
 accgagatgc cctggaggtt ttacagagca ttccacttcg acgtcaccca cagcatcgac 840
 aacatcgaca aggacggcca cggccactat tatgtaaagg cggaattatt cagtgtaaat 900
 ggaagtgcgc taccgaatga tctcctgect caaaccacca tctcacacag gccagccggc 960
 ggacacgttg atg 973

<210> 158

<211> 103

<212> PRT

<213> *Megathura crenulata*

<400> 158

Gly His Asp His Ser Glu Arg His Asp Gly Phe Phe Arg Lys Glu Val
 1 5 10 15

Gly Ser Leu Ser Leu Asp Glu Ala Asn Asp Leu Lys Asn Ala Leu Tyr
 20 25 30

Lys Leu Gln Asn Asp Gln Gly Pro Asn Gly Tyr Glu Ser Ile Ala Gly
 35 40 45

Tyr His Gly Tyr Pro Phe Leu Cys Pro Glu His Gly Glu Asp Gln Tyr
 50 55 60

Ala Cys Cys Val His Gly Met Pro Val Phe Pro His Trp His Arg Leu
 65 70 75 80

His Thr Ile Gln Phe Glu Arg Ala Leu Lys Glu His Gly Ser His Leu
 85 90 95

Gly Leu Pro Tyr Trp Asp Trp
 100

<210> 159
 <211> 310
 <212> DNA
 <213> *Megathura crenulata*

 <400> 159
 gtcacgatca cagtgaacgt cacgatggat ttttcaggaa ggaagtcggt tccctgtccc 60
 tggatgaagc caatgacctt aaaaatgcac tgtacaagct gcagaatgat cagggtccca 120
 atggatatga atcaatagcc ggttaccatg gctatccatt cctctgccct gaacatgggt 180
 aagaccagta cgcattgctgt gtccacggaa tgccctgtatt tccacattgg cacagacttc 240
 atacaatcca gtttgagaga gctctcaaag aacatgggtc tcatttgggt ctgccatact 300
 gggactggac 310

 <210> 160
 <211> 32
 <212> DNA
 <213> *Haliotis tuberculata*

 <400> 160
 ggcttggtca gtttctactc gtgcacctg tg 32

 <210> 161
 <211> 16
 <212> DNA
 <213> *Haliotis tuberculata*

 <400> 161
 gtgggggctg gagcag 16

 <210> 162
 <211> 350
 <212> DNA
 <213> *Haliotis tuberculata*

 <400> 162
 acaacgtcgt cagaaaggac gtgagtcacc tcacagtga cgaggtgcaa gctcttcacg 60
 gcgccttcca tgacgtcact gcattctacag ggcctctgag ttccgaagac ataactctct 120
 accatgcgcg accagcgtcg tgtgactaca agggacggaa gatcgccctg tbtgtccacg 180
 gtatgcccg tttccccttc tggcacaggg catatgtcgt ccaagccgag cgggactctg 240
 tgtccaaacg gaagactgtc ggaatgcctt actgggactg gacgcaaacg ctgactcaact 300
 taccatctct tgtgactgaa cccatctaca ttgacagtaa aggtggaaa 350

 <210> 163
 <211> 221
 <212> DNA
 <213> *Haliotis tuberculata*

 <400> 163
 gctcaaacca actactggta ccgcggcgag atagcggtta tcaataagaa gactgcgcga 60
 gctgtagatg atgcctatt cgagaagggt gagcctgggt actacacaca tcttatggag 120
 actgtcctcg acgctctcga acaggacgaa ttctgtaaat ttgaaatcca gttcgagttg 180
 gtcataatg ctatccatta cttgggtggc ggtaaatttg a 221

 <210> 164
 <211> 255
 <212> DNA
 <213> *Haliotis tuberculata*

 <400> 164

atattccaatg	tcaaaacttg	aatacacctc	ctacgaaccc	atcttcttcc	tccaccactc	60
caacgcttgac	cgctcttcg	ccatctggca	gcgtcttcag	gaactgcgag	gaaagaatcc	120
caatgaatg	gactgtgcac	atgaactcgc	tcaccagcaa	ctccaacctc	tcaacaggga	180
cagcaatcca	gtccagctca	caaaggacca	ctcgacacct	gctgacctct	ttgattacaa	240
acaacttggg	tacag					255

<210> 165
 <211> 407
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 165	
ctacgcacgc	ttaaactgga atggaatgac gccagaacag ctgaaaacag aactagacga 60
acgcccactcc	aaagaacgtg cgtttgcaag ctcccgactc agtggccttg ggggttctgc 120
caacgttggt	gtctatgcat gtgtccctga tgaatgacga cgagtgatg actactgcga 180
gaaagcaggc	gactcttcca ttctggggg tcaaaagcaa atgcccgtga gattctacag 240
accctctctc	ttatgattgaa ctgaagcggg acatcacctt ggagtcgccg taagtggcca 300
ctactatggt	aaaaacagaa tcttcagcgt gaatggcaca gcactttcac ctgatcttct 360
ttctcaacca	actgttgctc accgacctgg gaaaggtcac cttgacc 407

<210> 166
 <211> 1245
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 166	
cacctgtgca	tcctcgccac gatgacgac ttattgttgc aaaaaatata gatcatttga 60
ctcgtgaaga	ggaatcacag ctaaggatgg ctctggagag attccaggcc gacacatccg 120
ttgatgggta	ccaggctaca gttagatgac atggccttcc tgcctgttgc ccacgaccag 180
atgcaaaagt	cagggtcgcc tgggtgatgc atggcatggc atccttccct cactggcacc 240
ggctgttctg	tacccagggt gaagatgctc ttgtacggcg tggatcgctc atcgggtgttc 300
cttattggga	ctgggacaaaa cctatgactc accctccaga ctgggacata aatgagacgt 360
acgtagaccc	gtatggacat acacatcata atccattctt caatgcaaat atatcttttg 420
aggaggagca	ccatcacacg agcaggatga tagattcgaa actgtttgac ccagtcgctt 480
ttggggagca	ttccatctg ttgtatggaa tctgtacgc atttgagcag gaagatttct 540
gcgactttga	gattcagttt gagttagtcc ataattctat tcatgctggt ataggcggtt 600
ccgaagatta	ctccatggcc accctgcatt acacagcctt tgacccatt ttctaccttc 660
atcattccaa	tgtcgatcgt ctatgggcaa tctggcaagc tcttcaaatc aggagacaca 720
agccatata	agcccactgt gcacagctct tggaaacagt gccaatgaag ccatttgctt 780
ttccatcacc	tttaaacac aacgagaaga cacatagtc ttcagtcgcc actgacatt 840
atgactacga	ggaagtgcgt cactacagct acgatgatct aacgttttgt gggatgaacc 900
ttgaagaagt	agaagaagct atacatctca gacacagca tgaacgagtc ttcgcgggat 960
ttctctctgc	tggaaatgga acatctgcac ttgttgacat ttctcaaat aaccgggga 1020
accaaccact	caaagtctga gatattgcca ttcttggtgg tgccaaaggaa atgccttggg 1080
cgtttgaccg	cttgataaag gtgcgaaata ctgactcatt gaagacact ttctctgatg 1140
tcgatggaga	ttatgaagtc acttttaaaa ttcatgatat gcacggaaac gctcttgata 1200
cggacctgat	tcacacgca gcagttgttt ctgagccagc tcacc 1245

<210> 167
 <211> 1242
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 167	
ctacctttga	ggatgaaaag cacagcttac gaatcagaaa aaatgtcgac agcttgactc 60
ctgaagaaac	aaatgaactg cgtaaagccc tggagcttct tgaaaatgat catactgcag 120
gtggattcaa	tcagcttggc gccttccatg gagagcctaa atgggtccct aatcctgaag 180
cggagaccaa	ggttgcatgc tgtgttcctg gcatggctgt ttccctcatg tggcacaggc 240
ttcttgctct	ccaggcgagg aatgctctta gaaagcatgg gtacagtggt gctctaccat 300
actgggattg	gactcgcccc ctttcccaac ttctgatct gggttagtcat gacgagata 360
catgctcttc	cgaccatcac gtgaagcata accggggtt caatggccac atcgatacag 420

taaatacaggga	taccaccagga	agcgtaacggg	aggatcttta	tcaacaacct	gaatttggac	480
atttcacggga	tatttgtcaa	caagtccctct	tagcattaga	acaagatgac	tctgtgtcgt	540
ttgaagtgcga	gtatgagatt	tcccataatt	ttatccatgc	acttgttagga	ggaaccgcagc	600
cttatggcat	ggcatcgctg	agatatacag	cataccgatcc	aattcttttc	ttgcacatatt	660
caaacacaggga	caggatctgg	gctattttggc	aatccctgcga	aaaatacaga	ggcacaacggt	720
acaacactgcg	caactgcgcc	atagaatcta	tgagaaggcc	cctgcaacca	tttggactaa	780
cgagtgcctat	taacctcgac	agaatcacca	gagagcatgc	tatcccggtt	gatgtcttcca	840
actatagagga	tacccttcat	tacgtatatg	ataccctgga	atttaagtgt	ttgtcgtattt	900
cacaactttga	tagagagctg	gaaaaaatca	agagtcacga	aagagtattt	gctggattctt	960
tgtgtctcagg	gattaaaaaa	tctgtctctt	tgaatttcga	agtttgtact	ccactgggata	1020
attgtctcaga	agcaggggag	ttttatctac	tccggggacga	aaacgagatg	gcttctggcct	1080
atgaccgcact	tttcaagtat	gatattactc	aggttcttga	agcaaacctat	ctacacttctt	1140
atgatcatctc	cttcattcgc	tacgaagctg	ttgatcttaa	aggagtgtagt	ttgggaactg	1200
acctgttcca	cactgcacaat	gtgggtacatg	attccggcac	ag		1242

<210> 168

<211> 1239

<212> DNA

<213> *Haliotis tuberculata*

<400> 168

gcaccctgga	tctgtataac	tacgtttgaag	aagttactgg	ggccagtcac	atcaggaaga	60
atttgaaacga	cttcaataacc	ggagaaatgg	aaagccttag	agctgtcttc	ctgcataattc	120
aggagcagcg	aacatatagaa	tctattgtccc	agtaccatgg	caaaccaggc	aaatgtcaat	180
tgaatgatca	taatatgtcg	tgttgtgtcc	atggtagtgc	taccttcccc	cagtggcaca	240
gactgtatgt	ggttcaggtg	gagaatgctc	tcttaaacag	gggacttggt	gtggctgttc	300
cttactggga	gtggactgct	cccatagacc	atctacctca	ttctattgat	gatgcaacat	360
acttcaattc	cgcacaacag	cggtacgacc	ctaacccttt	cttcagggga	aaggttacttt	420
ttgaaaaacgc	agtcacaaca	agggacccac	aagccgggct	cttcaactca	gattatatgt	480
atgagaatgt	tttacttgca	ctggagcagg	aaaattattg	tgactttgaa	attcagtttg	540
agctgtttca	ttaacgcactt	cattccatgc	tgggaggtaa	agggcagtag	tccatgtcct	600
ccctgtgacta	ttctgcgttt	gatcccgctt	tcttctacac	tcactgcacac	agcagcagac	660
tgtggggacta	ctggcaggaa	ctacaaagat	tccgagaact	gccttatgaa	gagcggaaact	720
gtgcaatcaat	ctctatgcac	caaccactga	agccgttcag	tgatccacat	gagatcacg	780
acaatgtcac	ttgaaataac	tcaaaaccac	aggacggatt	cgactaccag	aaccacttcg	840
gatacaagta	tgcacaactt	gagttccatc	acttatctat	cccaagtctt	gatgctacc	900
tgaagcaaa	gagaaatcac	gacagagtg	ttgcgggctt	ccttcttcat	aacataggaa	960
cttctgctga	cataactatc	tacatatgtc	tgcctgacgg	acggcgtggc	aatgactgca	1020
gtcatgagcg	gggaacattc	tatatcctcg	gaggcgaaac	agagatgcct	tttatctttg	1080
accgttttga	taaaatttga	atcaccaaac	cactgcaaca	gttaggagtc	aagctgcagt	1140
gtggagtttt	cgaaacttgg	cttgagatca	aggcatatac	cggttcctat	ctggatcccc	1200
ataccctttga	tccaactatc	atctttgaac	ctggaacag			1239

<210> 169

<211> 1260

<212> DNA

<213> *Haliotis tuberculata*

<400> 169

atacccatat	cttgaccac	gaccatgagg	aagagatact	tgtcaggaag	aatataattg	60
atttgagccc	aaggggagag	gtttctctag	tcaaaagctt	gcaaaagagt	aagaatgac	120
gtctcgcctga	tgggtaccac	gccattgctc	ctttcccatg	cctgcacca	ctctgtccca	180
atccatctgc	agctcacctg	tatgtctgct	gtgtccatgg	catggctaca	tttccccagt	240
ggcacagact	tgcactctgt	cagggttcagg	atgccctgag	gagacatggt	tcacttgttg	300
gtatttcctta	cttgggactg	acaaaaccag	tcaacagagt	accgcagctt	ctttcttcag	360
caacattttc	ctatccaatc	cggaaatatta	atatttcaaa	tccattcttc	ggggctgaca	420
tagaatttga	aggaccgggc	gttcatacac	agaggcacat	aaatactgag	cgcctgtttg	480
acagtgggga	tcatgcaggc	taccacaact	ggttcttcga	aactgtttct	tttgccttgg	540
aacagggaaga	ttactcggat	tttgaataac	aaatttgatg	agcccataat	ggcatccaca	600
catggatttg	tgggaagcga	gtatatggca	tgggacacct	tcactatgca	tcatatgatc	660
caatttttca	catccaccat	tcacagacgg	acagaatatg	ggctatttgg	caagagctgc	720

agaagtacag ggggtctatct gggtcgggaag caaactgtgc cattgaacat atgagaacac 780
 ccttgaagcc tttcagctttt ggggccaccct acaatttgaa tagtcatcag caagaatatt 840
 caaagcctga ggacacgcttt gactataaga agtttgggata cagatatgat agtctgggaat 900
 tggagggggc atcaattttct cgcatttgatg aacttatcca gcagagacag gagaaagaca 960
 gaacttttgc aggggttccctc cttaaagggtt ttgggtacatc cgcattctgtg tcattgcaag 1020
 ttgcagagat tgatcacacc tgtaaaagatg cgggctattt cactattctg ggaggatcag 1080
 cggaaatgcc atgggcattc gacaggctttt ataagtatga cttactaaa actcttcacg 1140
 acatgaacct gaggcacagag gacactttct ctatagacgt aactatcacg tcttacaatg 1200
 gaacagtact ctccgggagac ctcatccaga cgccctccat tatatttgta cctggagccc 1260

<210> 170
 <211> 191
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 170
 ataaactcaa ctcacggaaa catacaccta acagagtcgg ccatgagcta agtagcctta 60
 ttcccccgtga catagcaagc ttgaaggcag ctttgacaag ccttcaacat gataatggga 120
 ctgatgtgta tcaagctatt gctgccttcc atggcgcttc tgcgcagtc cacgagccat 180
 ctggacgtga g 191

<210> 171
 <211> 1060
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 171
 atcgctgtgt gcatccacgg catggcgacg ttctctcaact ggcacgggtt gtacactctg 60
 cagtttggagc aagcgctgcg cagacacggg tccagtggtg ctgttccata ctgggactgg 120
 accaagccaa tcacggaact gccacacatt ctgacagacg gagaatatta tgacgtttgg 180
 caaaatgccg tcttggccaa tccgtttgca agaggttatg tgaaaattaa agatgcattt 240
 acgggtgagaa atgtccagga aagtctgttc aaaatgtcaa tttttggaaa gcactcgctt 300
 ctgtttgacc aggcctttgtt ggctcttgaa caaactgact actgtgactt cgaagtgcac 360
 ttgtgaagtga tgcataacac gatccattat ctcgtaggag ggcgtcaaac gtacgccttc 420
 tctctctctg agtatctctc atacgatcca atctctctta ttcaccactc gtttgtgtgac 480
 aaaatatggg ctgtatggca agaactgcaa agcaggagac atctacagtt tagaacagct 540
 gattgtgctg tgggcctcat gggtcaggca atgagccctt tcaacaagga tttcaaccac 600
 aactcgttca ccaagaagca cgcagtcctt aatacagtat ttgattatga agatcttggc 660
 tataactatg acaaccttga aatcagtggt ttaaacttaa atgagatcga ggcgttaata 720
 gcaaaaacgca agtcacatgc tagagctctt gctgggttcc tgtgttttg attaggaact 780
 tcggctgata tacatctgga aatttgcaag acatcggaac actgcatga tgctgtgtgtg 840
 attttatctc ttggagggttc tgcagagatg cattgggcat acaaccgcct ctacaagtat 900
 gacattacag aagcattgca ggaatttgac atcaaccctg aagatgtttt ccatgctgat 960
 gaaccatttt tctcgaggct gtcggttggt gctgtgaatg gaactgtcat tccatcgtct 1020
 catcttcacc agccaacgat aatctatgaa ccaggcgaag 1060

<210> 172
 <211> 219
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 172
 atcaccatga cgaccatcag tcgggaagca tagcaggatc cgggggtccgc aaggacgtga 60
 acaccttgac taaggctgag accgacaacc tgaggaggag gctgtgggggt gtcatggcag 120
 accacggttc caatggcttt caagctattg ctgctttcca tggaaaacca gctttgtgtc 180
 ccatgctcga tggccaacac tactcatgtt gtactcacg 219

<210> 173
 <211> 164
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 173
 gcatggctac cttccacac tgccatcgcc tctacacca gcagatggag gatgcaatga 60
 gggcgcatgg gtctcatgtc ggctcgccct actgggactg gactgctgcc ttcaaccacc 120
 tggcaacact ggtcaccgac acggacaaca accccttcca acat 164

<210> 174
 <211> 826
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 174
 ggacacattg attatctcaa tgtcagcaca actcgatctc cccgagacat gctgttcaac 60
 gaccccgagc atggatcaga gtctgtcttc tacagacaa gctctcttagc ttggaacaa 120
 actgtatttc gcaaatctga agttcagttt gagataaccc acaatgccat ccattctctgg 180
 acaggtggcc acagccctca cggaaatgcc actctcgact tcactgacct cgatctctc 240
 ttctggtctc accactccaa cccgcacaga atctgggctg tctggcaagg ttgcaagaa 300
 tacagaggac ttccatataa ccatgccaat tgtgagatcc agggcaatgaa aagcccccctg 360
 agggctttca gtgacgatat caaccacaac ccagtcacaa aggcctaacc agctcatta 420
 gatgtgtctg agtataatcg gttgagcttc cagtacgaca acctcatctt ccattggatac 480
 agtattccgg aacttgatcg cgtgcttgaa gaaagaaagg agggagacag aatatttctg 540
 gccctctctc tcaagtgaat caagcgtagt gctgatgtag tgttcgacat atgccagcca 600
 gaacacgaat gtgtgttcgc agggactttt gcgatttttg gaggggagct agaaatgcc 660
 tggctctctg acagactggt ccgctatgat atcaccaaag tgatgaagca gctacacctg 720
 aggcattgact ctgactttac cttcagggtg aagattgtcg gcaccgaca ccacgagctt 780
 ccttcagaca gtgtcaagg accaaactatt gaatttgaac cgggcy 826

<210> 175
 <211> 1535
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 175
 tgcacagagg cggaaaccac gaagatgaac accatgatga cagactcgca gatgtcctga 60
 tcaggaaaga agttgacttc ctctccctgc aagaagccaa cgcaattaag gatgcactgt 120
 acaagctcca gaatgcagac agtaaaaggg gctttgagc catagctggc tatcacgggt 180
 atcctaataat gtgtccagaa agaggtacgc acaagatccc ctgctgtctc cacggaaatgc 240
 ccgtgtctcc ccaactggca cgcctgcata ccattcagat ggagagagct gtgaaaaccc 300
 atggctctcc aaatgggcatt ccttactggg attggacaaa gaagatgtcg agtcttccat 360
 ctttcttttg agattccagc aacaacaacc cttctacaa atattacac ccggggcgctg 420
 agcacgaaac aaccaggagc attaatcaga gactctttaa tcaaaccaag tttgtgaat 480
 gtgattacct atattacct actctgcaag tcttgaggga aaactcgatc tgtgactttg 540
 aagttcagta tgagatcttc cataacgcgc tccactctcg gcttgaggga actggaaagt 600
 attcatgctg taacctggag cattcgccct ttgacctgt ctctcatgatt caccactcga 660
 gttttgatag aatctggatc ctttggcaga agttgcaaaa gataagaatg aagccttact 720
 acgcatttga tttgtctggc gacagactta tgaagacccc cctgcatccc ttcaactacg 780
 aaacgcttaa tgaagatgaa ttcaaccgca tcaactcttt ccaagcata ctgtttgacc 840
 actacaggtt caactatgaa tacgataaca tgaagaatcag gggtcaggac atacatgaac 900
 ttgaagaggt aattcaggaa ttaagaacaa aagatcgcat atttgcctgt ttgttttgt 960
 cgggcttacg gatcatcagc acagtgaagc tattcatcca ttgcgaaaac gatcaagtc 1020
 acgaaagata tgcaggagaa tttgcagttt tgggaggtga gaaggagatg ccgtgggcat 1080
 atgaaagatc gctgaaattg gacatctccg atgctgtaca caagcttccag tggaaagatg 1140
 aagcactccg ttttagatgt gttgttactg cctacaacgg tgacgttgtt accaccaggc 1200
 tgtctcagcc cagttagtgc cccctccagc cccatgtggc tccgacatc ttgtatacc 1260
 cagttagtgc gggccatgac ctccgcgcta aagtcgtagt aaagagcggc accaaagtgc 1320
 agtttacacc aatagattcg tccgtgaaca aagcaatggt ggagctgggc agctatactg 1380
 ctatggctaa atgcactggt cccctcttct cttaccacgg ctttgaactg gacaaagtct 1440

acagcgtcga tcacggagac tactacattg ctgcaggtac ccacgcgttg tgtgagcaga 1500
 acctcaggct ccacatccac tggaacacg agtag 1535

<210> 176
 <211> 7
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 176
 ttcacag 7

<210> 177
 <211> 471
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 177
 gttgctatgc cgactgcgct atattggtga acgagacgat gaggacatct ctgaaagagt 60
 tcgccaaagt atgtgtaggc cacggaagta ttgttgagct aacaatatga tgatttcaaa 120
 atgacttggc gctctaggac aaagacataa ttcacagca ccctgtgcac caactctttg 180
 ttgtctgcaa acgtctgaca agcgacacgt caatcaacaa gctgttcaaa ctcaagtggg 240
 tgtaactaga atcgttgggc catcgttcac aaagtattga cagatgtcac acatgatggc 300
 gagaaacact ttagaacttt taatgaccta gagtgacttg taaatatgta aatatattct 360
 tcaagactc agctgaacta ttgttgata acacatcaat tcctcaaca aaatgcttta 420
 tcttcacagt gatgtatgta atgtggccgg caataaagta tatatatgta t 471

<210> 178
 <211> 15
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 178
 Leu Val Gln Phe Leu Leu Val Ala Leu Val Val Gly Ala Gly Ala
 1 5 10 15

<210> 179
 <211> 407
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 179
 Asp Asn Val Val Arg Lys Asp Val Ser His Leu Thr Val Asp Glu Val
 1 5 10 15

Gln Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro
 20 25 30

Leu Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys
 35 40 45

Asp Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser
 50 55 60

Phe Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu
 65 70 75 80

Leu Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln
 85 90 95

Thr Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp
 100 105 110
 Ser Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile
 115 120 125
 Ala Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe
 130 135 140
 Glu Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu
 145 150 155 160
 Asp Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu
 165 170 175
 Leu Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr
 180 185 190
 Ser Met Ser Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu
 195 200 205
 His His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln
 210 215 220
 Glu Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu
 225 230 235 240
 Ala His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln
 245 250 255
 Leu Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln
 260 265 270
 Leu Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu
 275 280 285
 Gln Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe
 290 295 300
 Ala Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val
 305 310 315 320
 Tyr Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu
 325 330 335
 Lys Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp
 340 345 350
 Arg Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His
 355 360 365
 Leu Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe
 370 375 380
 Ser Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr
 385 390 395 400
 Val Ala Tyr Arg Pro Gly Lys
 405

<210> 180
 <211> 419
 <212> PRT
 <213> Haliotis tuberculata

<400> 180
 Gly His Leu Asp Pro Pro Val His His Arg His Asp Asp Asp Leu Ile
 1 5 10 15
 Val Arg Lys Asn Ile Asp His Leu Thr Arg Glu Glu Glu Tyr Glu Leu
 20 25 30
 Arg Met Ala Leu Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
 35 40 45
 Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Arg Pro
 50 55 60
 Asp Ala Lys Val Arg Phe Ala Cys Cys Met His Gly Met Ala Ser Phe
 65 70 75 80
 Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Val
 85 90 95
 Arg Arg Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Lys Pro
 100 105 110
 Met Thr His Leu Pro Asp Leu Ala Ser Asn Glu Thr Tyr Val Asp Pro
 115 120 125
 Tyr Gly His Thr His His Asn Pro Phe Phe Asn Ala Asn Ile Ser Phe
 130 135 140
 Glu Glu Gly His His His Thr Ser Arg Met Ile Asp Ser Lys Leu Phe
 145 150 155 160
 Ala Pro Val Ala Phe Gly Glu His Ser His Leu Phe Asp Gly Ile Leu
 165 170 175
 Tyr Ala Phe Glu Gln Glu Asp Phe Cys Asp Phe Glu Ile Gln Phe Glu
 180 185 190
 Leu Val His Asn Ser Ile His Ala Trp Ile Gly Gly Ser Glu Asp Tyr
 195 200 205
 Ser Met Ala Thr Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu
 210 215 220
 His His Ser Asn Val Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln
 225 230 235 240
 Ile Arg Arg His Lys Pro Tyr Gln Ala His Cys Ala Gln Ser Val Glu
 245 250 255
 Gln Leu Pro Met Lys Pro Phe Ala Phe Pro Ser Pro Leu Asn Asn Asn
 260 265 270
 Glu Lys Thr His Ser His Ser Val Pro Thr Asp Ile Tyr Asp Tyr Glu
 275 280 285

Glu Val Leu His Tyr Ser Tyr Asp Asp Leu Thr Phe Gly Gly Met Asn
 290 295 300
 Leu Glu Glu Ile Glu Glu Ala Ile His Leu Arg Gln Gln His Glu Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Ala Gly Ile Gly Thr Ser Ala Leu Val
 325 330 335
 Asp Ile Phe Ile Asn Lys Pro Gly Asn Gln Pro Leu Lys Ala Gly Asp
 340 345 350
 Ile Ala Ile Leu Gly Gly Ala Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365
 Leu Tyr Lys Val Glu Ile Thr Asp Ser Leu Lys Thr Leu Ser Leu Asp
 370 375 380
 Val Asp Gly Asp Tyr Glu Val Thr Phe Lys Ile His Asp Met His Gly
 385 390 395 400
 Asn Ala Leu Asp Thr Asp Leu Ile Pro His Ala Ala Val Val Ser Glu
 405 410 415
 Pro Ala His

 <210> 181
 <211> 414
 <212> PRT
 <213> *Haliotis tuberculata*

 <400> 181
 Pro Thr Phe Glu Asp Glu Lys His Ser Leu Arg Ile Arg Lys Asn Val
 1 5 10 15
 Asp Ser Leu Thr Pro Glu Glu Thr Asn Glu Leu Arg Lys Ala Leu Glu
 20 25 30
 Leu Leu Glu Asn Asp His Thr Ala Gly Gly Phe Asn Gln Leu Gly Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Asn Pro Glu Ala Glu His Lys
 50 55 60
 Val Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Ala Leu Gln Ala Glu Asn Ala Leu Arg Lys His Gly Tyr Ser
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser Gln Leu Pro
 100 105 110
 Asp Leu Val Ser His Glu Gln Tyr Thr Asp Pro Ser Asp His His Val
 115 120 125
 Lys His Asn Pro Trp Phe Asn Gly His Ile Asp Thr Val Asn Gln Asp
 130 135 140

Thr Thr Arg Ser Val Arg Glu Asp Leu Tyr Gln Gln Pro Glu Phe Gly
 145 150 155 160
 His Phe Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175
 Asp Phe Cys Ser Phe Glu Val Gln Tyr Glu Ile Ser His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Thr Asp Ala Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Ala Tyr Asp Pro Ile Phe Phe Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Glu Ser Met Arg Arg Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ser Ala Ile Asn Pro Asp Arg Ile Thr Arg Glu
 260 265 270
 His Ala Ile Pro Phe Asp Val Phe Asn Tyr Arg Asp Asn Leu His Tyr
 275 280 285
 Val Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Glu Lys Ile Lys Ser His Glu Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Ile Lys Lys Ser Ala Leu Val Lys Phe Glu Val Cys
 325 330 335
 Thr Pro Pro Asp Asn Cys His Lys Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350
 Asp Glu Asn Glu Met Ala Trp Ala Tyr Asp Arg Leu Phe Lys Tyr Asp
 355 360 365
 Ile Thr Gln Val Leu Glu Ala Asn His Leu His Phe Tyr Asp His Leu
 370 375 380
 Phe Ile Arg Tyr Glu Val Phe Asp Leu Lys Gly Val Ser Leu Gly Thr
 385 390 395 400
 Asp Leu Phe His Thr Ala Asn Val Val His Asp Ser Gly Thr
 405 410

<210> 182

<211> 413

<212> PRT

<213> *Haliotis tuberculata*

<400> 182

Gly Thr Arg Asp Arg Asp Asn Tyr Val Glu Glu Val Thr Gly Ala Ser
 1 5 10 15

His Ile Arg Lys Asn Leu Asn Asp Leu Asn Thr Gly Glu Met Glu Ser
 20 25 30
 Leu Arg Ala Ala Phe Leu His Ile Gln Asp Asp Gly Thr Tyr Glu Ser
 35 40 45
 Ile Ala Gln Tyr His Gly Lys Pro Gly Lys Cys Gln Leu Asn Asp His
 50 55 60
 Asn Ile Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80
 Arg Leu Tyr Val Val Gln Val Glu Asn Ala Leu Leu Asn Arg Gly Ser
 85 90 95
 Gly Val Ala Val Pro Tyr Trp Glu Trp Thr Ala Pro Ile Asp His Leu
 100 105 110
 Pro His Phe Ile Asp Asp Ala Thr Tyr Phe Asn Ser Arg Gln Gln Arg
 115 120 125
 Tyr Asp Pro Asn Pro Phe Phe Arg Gly Lys Val Thr Phe Glu Asn Ala
 130 135 140
 Val Thr Thr Arg Asp Pro Gln Ala Gly Leu Phe Asn Ser Asp Tyr Met
 145 150 155 160
 Tyr Glu Asn Val Leu Leu Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Leu Val His Asn Ala Leu His Ser Met Leu Gly
 180 185 190
 Gly Lys Gly Gln Tyr Ser Met Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Phe Arg Glu Leu Pro Tyr Glu Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Asn Leu Met His Gln Pro Leu Lys Pro Phe Ser Asp Pro
 245 250 255
 His Glu Asn His Asp Asn Val Thr Leu Lys Tyr Ser Lys Pro Gln Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn His Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe His His Leu Ser Ile Pro Ser Leu Asp Ala Thr Leu Lys Gln Arg
 290 295 300
 Arg Asn His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Asp Ile Thr Ile Tyr Ile Cys Leu Pro Asp Gly Arg Arg
 325 330 335

Gly Asn Asp Cys Ser His Glu Ala Gly Thr Phe Tyr Ile Leu Gly Gly
340 345 350

Glu Thr Glu Met Pro Phe Ile Phe Asp Arg Leu Tyr Lys Phe Glu Ile
355 360 365

Thr Lys Pro Leu Gln Gln Leu Gly Val Lys Leu His Gly Gly Val Phe
370 375 380

Glu Leu Glu Leu Glu Ile Lys Ala Tyr Asn Gly Ser Tyr Leu Asp Pro
385 390 395 400

His Thr Phe Asp Pro Thr Ile Ile Phe Glu Pro Gly Thr
405 410

<210> 183

<211> 420

<212> PRT

<213> Haliotis tuberculata

<400> 183

Asp Thr His Ile Leu Asp His Asp His Glu Glu Glu Ile Leu Val Arg
1 5 10 15

Lys Asn Ile Ile Asp Leu Ser Pro Arg Glu Arg Val Ser Leu Val Lys
20 25 30

Ala Leu Gln Arg Met Lys Asn Asp Arg Ser Ala Asp Gly Tyr Gln Ala
35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Asn Pro Ser Ala
50 55 60

Ala His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Val Gln Asp Ala Leu Arg Arg His
85 90 95

Gly Ser Leu Val Gly Ile Pro Tyr Trp Asp Trp Thr Lys Pro Val Asn
100 105 110

Glu Leu Pro Glu Leu Leu Ser Ser Ala Thr Phe Tyr His Pro Ile Arg
115 120 125

Asn Ile Asn Ile Ser Asn Pro Phe Leu Gly Ala Asp Ile Glu Phe Glu
130 135 140

Gly Pro Gly Val His Thr Glu Arg His Ile Asn Thr Glu Arg Leu Phe
145 150 155 160

His Ser Gly Asp His Asp Gly Tyr His Asn Trp Phe Phe Glu Thr Val
165 170 175

Leu Phe Ala Leu Glu Gln Glu Asp Tyr Cys Asp Phe Glu Ile Gln Phe
180 185 190

Glu Ile Ala His Asn Gly Ile His Thr Trp Ile Gly Gly Ser Ala Val
195 200 205

Tyr Gly Met Gly His Leu His Tyr Ala Ser Tyr Asp Pro Ile Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu
 225 230 235 240
 Gln Lys Tyr Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Ile Glu
 245 250 255
 His Met Arg Thr Pro Leu Lys Pro Phe Ser Phe Gly Pro Pro Tyr Asn
 260 265 270
 Leu Asn Ser His Thr Gln Glu Tyr Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285
 Tyr Lys Lys Phe Gly Tyr Arg Tyr Asp Ser Leu Glu Leu Glu Gly Arg
 290 295 300
 Ser Ile Ser Arg Ile Asp Glu Leu Ile Gln Gln Arg Gln Glu Lys Asp
 305 310 315 320
 Arg Thr Phe Ala Gly Phe Leu Leu Lys Gly Phe Gly Thr Ser Ala Ser
 325 330 335
 Val Ser Leu Gln Val Cys Arg Val Asp His Thr Cys Lys Asp Ala Gly
 340 345 350
 Tyr Phe Thr Ile Leu Gly Gly Ser Ala Glu Met Pro Trp Ala Phe Asp
 355 360 365
 Arg Leu Tyr Lys Tyr Asp Ile Thr Lys Thr Leu His Asp Met Asn Leu
 370 375 380
 Arg His Glu Asp Thr Phe Ser Ile Asp Val Thr Ile Thr Ser Tyr Asn
 385 390 395 400
 Gly Thr Val Leu Ser Gly Asp Leu Ile Gln Thr Pro Ser Ile Ile Phe
 405 410 415
 Val Pro Gly Arg
 420

<210> 184
 <211> 417
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 184
 His Lys Leu Asn Ser Arg Lys His Thr Pro Asn Arg Val Arg His Glu
 1 5 10 15
 Leu Ser Ser Leu Ser Ser Arg Asp Ile Ala Ser Leu Lys Ala Ala Leu
 20 25 30
 Thr Ser Leu Gln His Asp Asn Gly Thr Asp Gly Tyr Gln Ala Ile Ala
 35 40 45
 Ala Phe His Gly Val Pro Ala Gln Cys His Glu Pro Ser Gly Arg Glu
 50 55 60

Ile Ala Cys Cys Ile His Gly Met Ala Thr Phe Pro His Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Leu Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95
 Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile Thr Glu Leu Pro
 100 105 110
 His Ile Leu Thr Asp Gly Glu Tyr Tyr Asp Val Trp Gln Asn Ala Val
 115 120 125
 Leu Ala Asn Pro Phe Ala Arg Gly Tyr Val Lys Ile Lys Asp Ala Phe
 130 135 140
 Thr Val Arg Asn Val Gln Glu Ser Leu Phe Lys Met Ser Ser Phe Gly
 145 150 155 160
 Lys His Ser Leu Leu Phe Asp Gln Ala Leu Leu Ala Leu Glu Gln Thr
 165 170 175
 Asp Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Met His Asn Thr Ile
 180 185 190
 His Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Phe Ser Ser Leu Glu
 195 200 205
 Tyr Ser Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Ile Trp Ala Val Trp Gln Glu Leu Gln Ser Arg Arg His Leu Gln
 225 230 235 240
 Phe Arg Thr Ala Asp Cys Ala Val Gly Leu Met Gly Gln Ala Met Arg
 245 250 255
 Pro Phe Asn Lys Asp Phe Asn His Asn Ser Phe Thr Lys Lys His Ala
 260 265 270
 Val Pro Asn Thr Val Phe Asp Tyr Glu Asp Leu Gly Tyr Asn Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ser Gly Leu Asn Leu Asn Glu Ile Glu Ala Leu Ile
 290 295 300
 Ala Lys Arg Lys Ser His Ala Arg Val Phe Ala Gly Phe Leu Leu Phe
 305 310 315 320
 Gly Leu Gly Thr Ser Ala Asp Ile His Leu Glu Ile Cys Lys Thr Ser
 325 330 335
 Glu Asn Cys His Asp Ala Gly Val Ile Phe Ile Leu Gly Gly Ser Ala
 340 345 350
 Glu Met His Trp Ala Tyr Asn Arg Leu Tyr Lys Tyr Asp Ile Thr Glu
 355 360 365
 Ala Leu Gln Glu Phe Asp Ile Asn Pro Glu Asp Val Phe His Ala Asp
 370 375 380

Glu Pro Phe Phe Leu Arg Leu Ser Val Val Ala Val Asn Gly Thr Val
385 390 395 400

Ile Pro Ser Ser His Leu His Gln Pro Thr Ile Ile Tyr Glu Pro Gly
405 410 415

Glu

<210> 185

<211> 403

<212> PRT

<213> *Haliotis tuberculata*

<400> 185

Asp His His Asp Asp His Gln Ser Gly Ser Ile Ala Gly Ser Gly Val
1 5 10 15

Arg Lys Asp Val Asn Thr Leu Thr Lys Ala Glu Thr Asp Asn Leu Arg
20 25 30

Glu Ala Leu Trp Gly Val Met Ala Asp His Gly Pro Asn Gly Phe Gln
35 40 45

Ala Ile Ala Ala Phe His Gly Lys Pro Ala Leu Cys Pro Met Pro Asp
50 55 60

Gly His Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
65 70 75 80

Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Met Arg Ala His
85 90 95

Gly Ser His Val Gly Leu Pro Tyr Trp Asp Trp Thr Ala Ala Phe Thr
100 105 110

His Leu Pro Thr Leu Val Thr Asp Thr Asp Asn Asn Pro Phe Gln His
115 120 125

Gly His Ile Asp Tyr Leu Asn Val Ser Thr Thr Arg Ser Pro Arg Asp
130 135 140

Met Leu Phe Asn Asp Pro Glu His Gly Ser Glu Ser Phe Phe Tyr Arg
145 150 155 160

Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Lys Phe Glu Val
165 170 175

Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly His
180 185 190

Ser Pro Tyr Gly Met Ser Thr Leu Asp Phe Thr Ala Tyr Asp Pro Leu
195 200 205

Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
210 215 220

Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asn His Ala Asn Cys Glu
225 230 235 240

Ile Gln Ala Met Lys Thr Pro Leu Arg Pro Phe Ser Asp Asp Ile Asn
245 250 255

His Asn Pro Val Thr Lys Ala Asn Ala Lys Pro Leu Asp Val Phe Glu
260 265 270

Tyr Asn Arg Leu Ser Phe Gln Tyr Asp Asn Leu Ile Phe His Gly Tyr
275 280 285

Ser Ile Pro Glu Leu Asp Arg Val Leu Glu Glu Arg Lys Glu Glu Asp
290 295 300

Arg Ile Phe Ala Ala Phe Leu Leu Ser Gly Ile Lys Arg Ser Ala Asp
305 310 315 320

Val Val Phe Asp Ile Cys Gln Pro Glu His Glu Cys Val Phe Ala Gly
325 330 335

Thr Phe Ala Ile Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
340 345 350

Arg Leu Phe Arg Tyr Asp Ile Thr Lys Val Met Lys Gln Leu His Leu
355 360 365

Arg His Asp Ser Asp Phe Thr Phe Arg Val Lys Ile Val Gly Thr Asp
370 375 380

Asp His Glu Leu Pro Ser Asp Ser Val Lys Ala Pro Thr Ile Glu Phe
385 390 395 400

Glu Pro Gly

<210> 186

<211> 511

<212> PRT

<213> Haliotis tuberculata

<400> 186

Val His Arg Gly Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
1 5 10 15

Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
20 25 30

Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
35 40 45

Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
50 55 60

Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
65 70 75 80

Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
85 90 95

Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
100 105 110

Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125
 Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Ile Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Lys Tyr Ser Met Ser Thr Leu Glu His
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285
 Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
 290 295 300
 Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
 305 310 315 320
 Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
 325 330 335
 Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
 340 345 350
 Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
 355 360 365
 Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
 370 375 380
 Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
 385 390 395 400
 Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
 405 410 415
 Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
 420 425 430

Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
435 440 445

Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
450 455 460

Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
465 470 475 480

Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
485 490 495

Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
500 505 510

<210> 187

<211> 90

<212> DNA

<213> *Haliotis tuberculata*

<400> 187

gggtctccgt actgggactg gacgcagcat ctgactcaac tcccagatct ggtgtcagac 60
cccttggttg tcgaccggga aggaggaaag 90

<210> 188

<211> 221

<212> DNA

<213> *Haliotis tuberculata*

<400> 188

gccccatgaca acgcatggta tcgtggaaac atcaagtttg agaataagaa gactgcaaga 60
gctgttgacg atgcgctttt cgagaagggt ggaccaggag agaatacccg actctttgaa 120
ggaattctcg atgctcttga acaggatgaa ttctgcaact tcgagatcca gtttgagttg 180
gctcacaacg ctatccacta cctgggtggc ggccgtcaca c 221

<210> 189

<211> 255

<212> DNA

<213> *Haliotis tuberculata*

<400> 189

gtactccatg tctcatctcg agtacacctc ctacgacccc ctcttcttcc tccatcactc 60
caacaccgac cgcattctcg ccattctggca acgtcttcag gtactcagag gaaaggaccc 120
caacaccgac gactgcgac acaacctcat ccattgagccc atggaaccgt tccgtcgga 180
ctcgaacctt cttgacctca ccagggaata ctccaaacca attgacagct ttgattatgc 240
ccaccttggc tacca 255

<210> 190

<211> 407

<212> DNA

<213> *Haliotis tuberculata*

<400> 190

gtatgatgac ttgacctga acggtatgac cccagaggaa ttgaactcat atctgcatga 60
acggtcaggc aaggaggggg tgttcgcaag ctcccgactc tcaggttttg gcggctctgc 120
taacgttgtt gctctacgcat gccgtcctgc ccacgatgaa atggctgtcg atcagtgcca 180
caaaagccggc gacttctttg tgttggggcg acccaccgag atgccctgga ggttttacag 240
agcattccac ttgcagctca ccgacagcat cgacaacatc gacaaggacc gccacggcca 300
ctattatgta aaggcggaat tattcagtg aaatggaagt gcgctaccga atgatctcct 360
gcctcaacc accattccac acaggccagc ccgcggacac gttgatg 407

<210> 191
 <211> 1239
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 191
 aggccccagc tccctcctcg gatgctcacc tcgccgctcag gaaggatata aaccatctga 60
 cagcgcagga ggggtacagag ctgcgcagag attccaggcc gacacatccg 120
 ttgatgggta ccaggctcag gttgagatc acggcttacc tgctcgatgt ccattccccg 180
 aggccacaaa taggttgccc tgttgcatcc acggcatggc gacattccct catctggaca 240
 gactgttctg taccagggtg gaagatgcac tgatcaggcg aggatcccc ataggggtcc 300
 cctactggga ctggactcag cctatggcac atctcccagg acttgccagc aacgccacct 360
 atagagatcc catcagcggg gacagcagac acaacccgtt ccacgatgtt gaagtgtgct 420
 ttgaaaaatg gcgtacagaa cgtcaccagg atagtagatt gtttgaacaa cctctatttg 480
 gcaaacatcac gcgtctcttc gacagtatag tctatgcttt tgagcaggag gacttctgcg 540
 attttgaagt tcaatttgag atgacccata ataatatcca cgctggattt ggtggcgccg 600
 ggaagtattc catgtctctc ctacactaca cagccttcga cctatctccc taccttctac 660
 actccaacac tgacgctctc tgggcaattt ggcaagcgtt gcagatacga agaaaacaa 720
 cgtataaagg tcatgtgtgt tggctcgagg aacgccagcc tctcaaacct ttccgctcca 780
 gttccccact gaacaaacac gaaaaaacct acgaaaactc ggtgccccac aacgtttacg 840
 actacgaagg agtccctggc tatacttatg atgacctcaa cttcgggggc atggacactg 900
 gtcagcttga ggaatacatc cagaggcaga gacagagaga caggaccctt gctggctctc 960
 ttctgtcaca tatgtgtaca tcacgcgaatg ttgaatcat tatagaccat gggactcttc 1020
 ataccctcgt gggcagcttt gctgttcttg gcggagagaa gggagattgg 1080
 accgttttga caaataatgag attacagatg aactgaggca acttaacttc cgtgctgatg 1140
 atggtttcag catctctgtt aaagtaactg atgttgatgg cagtgaactg tccctcgaac 1200
 tcatcccatc tgcgtctatc atcttcgaac gaagccata 1239

<210> 192
 <211> 1245
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 192
 ttgaccatca ggaccctcat caggacacaa tcatcaggaa aaatgttgat aatcttacac 60
 ccgagggaaat taattctctg agggagggcaa tggcagacct tcaatcagac aaaaccgccc 120
 gtggattcca gcaaatgtgt gcttttcacg gggaaacccaa atggtgccca agtccccgatg 180
 ctgagaagaa gtctctctgt tgtgtccatg gaatggctgt ctccctcac tggcacagac 240
 tccctaccgt gcaaggcagag aatgccctga atgtctcggg gctctcccc 300
 actgggactg gactcggccc ctgtctcacc tacttgattt ggttaagtac cagaactaca 360
 ccgagtcccat atccaccgtg gaagcccgaa acccctggta cagcggccat attgatacag 420
 ttggtgttga cacaacaaga agcgtccgtc aagaactgta tgaagctccc ggaattggct 480
 attatactgg ggtcgttaag caagtgcctc tggccttggg caggagatgc ttctgtgatt 540
 ttgaagtcca gtttgagata gctcacaaat tcatccacgc tcttctcggc ggaagcgagc 600
 catatggtat ggcgtcaact cgttacacta cttatgatcc aattttctac ctccatctat 660
 ctaaacactga cagactctgg gctatatggc aggcctctca aaagtacagg ggcaaacctt 720
 acaattccgc caactgtgcc attgcttcta tgagaaaacc cctacagccc ttgggtctga 780
 ctgatgagat caaccgggat gatgagacaa gacagcatgc tgttctcttc agtgcctttg 840
 attacaagaa caacttcaat tatgaatatg acacccctga cttaaacgga ctatcaactc 900
 ccacagctga cgttgaactg tcacggagaa agtctcatga cagagtattt gucggatttt 960
 tgcctgatctg tattcagcag tctgcactag ttaaatctct tgcctgcaaa tcagatgatg 1020
 actgtgacca ctatgctggt gaattctaca tcttgggtga tgaagctgaa atgccatggg 1080
 gctatgatgc tctttacaaa tatgagatca ctgagcagct caatgccctg gatctacaca 1140
 tcggagatgat attcttctac agatacgaag cgtttgatct tcatggtaca agtcttgaa 1200
 gcaacatctt ccccaaacct tctgtcatac atgacgaagg ggcag 1245

<210> 193
 <211> 1242
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 193
 gtccacatca ggctgacgag tacgacgaag ttgtaactgc tgcaagccac atcagaaaaa 60
 attttaaaga tctgtcaaaag ggagaagtag agagccctaa gtctgccttc ctgcaacttc 120
 agaacgacgg agtctatgag aatattgccaa aattccacgg caagcctggt ttgtgtgtag 180
 ataacggtgc caaggttgcc ttgtttgtcc atggaatgcc caccttcccc cagtggcaca 240
 gactctatgt cctccagggt gagaatgctt tgctggagag aggatctgcg gtctctgtgc 300
 catactggga ctggactgaa acatttacag agctgccatc ttgattgtct gaggctacct 360
 attteaactc ccgtcaacaa acgtttgacc ctaatccttt ctccagaggt aaaatcagtt 420
 ttgagaatgc tgtttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaaagt catgttggtc ttgaaacagg acaactactg cgacttcgag atacagtttg 540
 agatggttca caatgttctc catgcttgcc ttggtggaag agctacttat tctatttctt 600
 ctcttgatta ttctgcattc gaccctgtgt tttctctca ccatgcgaac acagatagat 660
 tgtgggcat ctggcaggag ctgcagaggt acaggaagaa gccatacaat gaagcggatt 720
 gtgcccattaa cctaatgcgc aaacctctac atcccttcga caacagtgt ctcaatcatg 780
 atcctgttaac ctttaataac tcaaaaccca ctgatggctt tgactaccag aacaactttg 840
 gatacaagta tgacaacctt gaggttcaatc atttcagtat tcccaggctt gaagaaatca 900
 ttcgtattag acaacgtcaa gatcgtgtgt ttgcaggatt cctccttcac aacattggga 960
 catccgcaac tgttgagata ttctgtctgt tccctaccac cagcgggtgag caaaaactgtg 1020
 aaaaacaaag cggaacattt gccgtactcg gaggagaaac agagatggcg ttctcattttg 1080
 acagactcta caggtttgac atcagtgaaa cactgggga cactggcata cagctggaca 1140
 gccatgactt tgacctcagc atcaagattc aaggagtaaa tggatcctac cttgatccac 1200
 acatcctgac agagcctacc ttgatttttg tgctgtgtc aa 1242

<210> 194
 <211> 1257
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 194
 gtctcttctc cgctctgact gggcattcag atgacatcct tgtgagaaaa gaagtgaaca 60
 gcctgacaac cagggagact gcatctctga tccatgctct gaaaagtatg cagggaagacc 120
 attcacctga tgggttccaa gccattgcct ctttccatgc cctgccacca ctctgccctt 180
 caccattctc aactcaacgt tatgtctgct gtgtccacgg catggctaca ttctccagtt 240
 ggacacagact gtacactgta cagttccagg atgcactgag gagacatgga gctgcagtag 300
 gtgtacagta ttgggattgg ctgcgacggc agtctcactc accagagctt gtcaccatgg 360
 agacatacca cgaattttgg agtaacagag atttcccaa tctttctac caagccaata 420
 ttgagtttga aggaataaac attacaacag agagagaagt catcgcagac aaactttttg 480
 tcaaaagtga acacgttttt gataactggt tcttcaaaaa agccatctca gcgcttgagc 540
 aggaaaaacta ctgtgacttt gagattcagt ttgaaattct tcaaacaggc gtccacacgt 600
 gggtcggagg cagtcgtacc cactctatcg gacatctcca ttacgcctcc tacgaccttc 660
 ttttctacct ccaccattcc cagacagacc gtattttggc aaactcggca gaactccagg 720
 aacagagagg gctctcaggt gatgaggctc actgtgctct cgagcaaatg agagaacctt 780
 tgaagccttt cagcttcggc gctccttata acttgaatca gctaacacag gatttctccc 840
 gacccgagga caccctcgac tacaggaagt ttggttatga atatgacat ttgaaattcc 900
 taggaattgtc agttgtctgaa ctggatcaat acattattga acatcagaag aatgatagag 960
 tattctgtgg gtctcgttg agtgatttcg aggtgtccgc atcagttaat ttccaggttt 1020
 gtatagctga ttcacatgt caggatgctg ggtacttcac cgttcttggt ggcaagtgtg 1080
 agatggcggt ggcatttgac aggcataaca tactgaaact tactgaaact ctggagaaaa 1140
 tgcacctctg atatgatgat gacttcacaa tctctgtcag tctgaccgcc aacaacggaa 1200
 ctgtcctgag cagcagctta atcccaaac cagatgtcat attccagcg ggacatc 1257

<210> 195
 <211> 191
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 195
 gtagacataaa taccaagagc atgtcagcga accgtgttgc cctgtgagct agcgcattgt 60
 ctgcgagggga cccgtctagt ctcaagctct ctctgcgaga cctacagagg gatgatggcc 120
 ccaacggata ccaggctctt gcagccttcc atgggctacc agcaggctgc catgatagcc 180
 agggaaatga g 191

<210> 196
 <211> 1057
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 196
 atgcgcatgtt gcattcacgg tatgccgacc ttcccccaagt ggccacagact gtacacccctg 60
 cagttggaga tggctctgag gagacatgga tcatctgtgc ccatccctcta ctgggactgg 120
 acaaaaggcta tctccgaact cccctcgtct ttcaccagcc ctgagtatta tgaccatagg 180
 catgatgctg tggtaaacaa cccattctcc aaagggttttg tcaaatttgc aaatacctac 240
 acagtaagag acccaagga gatgctgttc cagctttgtg aacatggaga gtcaactctc 300
 tatgagcaaa ctctctttgc tctagagcaa accgactact gtgattttga ggtacagttt 360
 gagggtctcc ataactgtat ccactaccct gttggggagc gtcagaccta cgcattgtct 420
 tctctgcatt atgcctccta cgaccattc ttctttatac accattctct tgtgggataag 480
 atgtgggtag tatggcaagc tcttcaaaag agggagaaac ttccatacaa gcgagctgac 540
 tgtgctgtca acctaatgac taaaccaatg aggcattttg actccgatat gaatcagaac 600
 ccattccaaa agatgcagc agttcccaac acactctatg actacgagac actgtactac 660
 agctacagata atctcgaaat aggtggcagg aatctcgacc agcttcaggc tgaattgtac 720
 agaagcagaa gccacagatc cgtttttgct ggattcttgc ttctgtgaaat cggaacttct 780
 gctgatgtca ggttttggat ttgtagaaat gaaaatgact gccacagggg tggaaataat 840
 ttcatcttag gtggagccaa ggaaatgcc aatgtcttgc acagaaactt caagtttgat 900
 atcacccatg tactcgagaa agctggcatt agcccagagg acgtgtttga tgcgtgaggag 960
 ccattttata tcaaggttga gatccatgct gttacaaga ccatgatacc atcgtctgtg 1020
 atcccagccc caactatcat ctattctcct ggggaag 1057

<210> 197
 <211> 219
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 197
 gtgcgcgtgc tgacagtgc cactcagcca acattgtctg ctctgggggtg aggaaggagc 60
 tcaagaccct cactgtgtct gagaaccgaga acctaaagaca ggctcttcaa ggtgtcatcg 120
 atgatactgg tcccaatggt taccagacaa tagcatcctt ccacgggaagt cctccaatgt 180
 gcgagatgaa cggcgcaagg gttgcctggt gtgctcacg 219

<210> 198
 <211> 164
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 198
 gtatggcctc ctctccacac tggccacagac tgtatgtgaa gcagatggaa gacgcctctg 60
 ctgaccacag atcacatata ggcattccct actgggactg gacaaatgac ttacacagat 120
 tacccgcctc tgcacagac tccgagaaca atcccttcaa tgag 164

<210> 199
 <211> 826
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 199
 ggtcgcatcg atcatctcgg tgtaaccacg tcaactgtccc ccagagacat gctgtttaac 60
 gaccagagagc aaggatcaga gtctgtcttc tatagacaag tctctctggc ttgtggagcag 120
 actgactact ccgagttcga agtccagttt gagctgaccc acaacgccat tcaactctgg 180
 acaggtggagc gtacgctcta cggaatgtcg accctcgagt tcacagccta cgatcctctc 240
 ttctggcttc accactccaa caccgacaga atctgggctg tctggcaagc actgcagaaa 300
 taccgaggacg tcccatacaa cgaagcacac tgtgaaatcc aggttctgaa acagcccttg 360
 aggcatttca acgatgacat caaccacaat ccaatcacca agactaatgc caggcctatc 420
 gattcatttg attatgagag gtttaactat cagatgaca cccttagctt ccatggtaag 480
 agcatccctg aactgaatga cctgtctcag gaaagaaaaa gagaagagag aacatttgct 540
 gccctccttc ttcgtggaat cggttgcagt gctgatgtcg tctttgacat ctgccgcccc 600
 aatggtgact gtgtctttgc aggaaccttt gctgtgctgg gaggggagct agaatgctc 660
 tggctccttg acagactgtt ccgctatgac atcaccagag tcatgaatca gctcctctc 720
 cagtatgatt cagatttcag ttccagggtg aagctgtgtg caaccaatgg cactgagctt 780
 tcatcagacc tctccaagtc accaacaatt gaactgaac ttggag 826

<210> 200
 <211> 1535
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 200
 cccacagagg accagttgaa gaaacagaag tcaactacca aaatactgac ggcaatgcac 60
 acttccatcg taaggaaagt gattcgtgtt ccttggatga agcaaaacac ttgaagaatg 120
 ccttttaccaa gctacagaaac gaccacagtc taacaggata cgaagcaatc tctggttacc 180
 atggataccc gaatctgtgt cgggaagaag gcgatgacaa atacccttgc tgcgtccacg 240
 gaatggccat ctctccccc tggtcacagac tcttgaccat ccaactggaa agagctctcg 300
 agcacaatgg tgcactgctt ggtgttctct actgggactg gaccaaggac ctgtctgcac 360
 tgcocggcgtt ctctcccgac tccagcaaca acaactcccta ctccaagtag cacatcgagc 420
 gtgtgttgta cgacaccgtc agagagccaa ctagtcttat atataaccag ccccaaatcc 480
 atgtctatga ttatctctat tactctagcat tgaccacgct tgaagaaaaa aattactgtg 540
 actttgaggt tcagtatgag atcctccaca acgocgtcca ctctgtgctt ggaggatccc 600
 agaagtatct catgtctacc ctggagtatt cggcctttga cctgtcttct atgatcctc 660
 actcgggtct agacagactt tggatcatct ggcaagaact tcagaagatc aggagaaagc 720
 cctacaactt cgctaaatgt gcttatcata tgatggaaga gccactggcg cctctcagct 780
 atccatctat caaccaggag gacttcaccc gtgccaactc caagccttct acagtttttg 840
 acagccataa gttcggctac cattacgata acctgaatgt tagaggctac agcatccaag 900
 aactcaacac aatcatcaat gacttgagaa acacagacag aatctacgca ggattgtgtt 960
 tgtcaggcat cggtagctgt gctagtgtca agatctatct ccgaacagat gacaatgacg 1020
 aagaaagtga aactttcact gtctctggag gagagagggg aatgccatgg gcctcagagc 1080
 gagttttcaa gtatgacatc acagaggttg cagatagact taaactaaat tatggggaca 1140
 cctttaacct ccgactagag atcacatcct acgatggatc ggttgtaaac aagagcctac 1200
 ccaatccttt catcatctac agacctgcca atcatgacta cgtatgttctt gttatcccaag 1260
 taggaaagaa ccttcacatc cctcccaag ttgtcgtcaa gagaggccac gcgcatcgagt 1320
 tcacccaggt cgaatgattca gttacagagac cagtgtgtga tcttggaagc tacactgcac 1380
 tcttcaactg tgtgttacca ccgttcacat accgoggatt cgaactggaac acgctctatt 1440
 ctgtcacgcc tgggtgactac tatgttaccg gaccaacgag agacctttgc cagaatgcag 1500
 atgtcaggat tcatatccat gttgaggatg agtaa 1535

<210> 201
 <211> 8
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 201

cgcaacag

8

<210> 202

<211> 211

<212> DNA

<213> *Haliotis tuberculata*

<400> 202

gtttcttggt ctccacatat tcacacatca gcaccaaagc gtttcgaagc acattggcgt 60
tcttctctgg caatgcattt caatacaaca ttgaaaatga cttcagcata tcagtgtgct 120
tcgaacgtgt tccggaagta ctcaaatgtg ctatgactga attattgtac atacataact 180
tattgatggt caataaataa atgttgaaac g 211

<210> 203

<211> 334

<212> PRT

<213> *Haliotis tuberculata*

<400> 203

His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg Gly
1 5 10 15

Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala His
20 25 30

Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser Gly
35 40 45

Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu Asn
50 55 60

Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro Leu
65 70 75 80

Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe Glu
85 90 95

Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His Asn
100 105 110

Asn Ile His Ala Trp Ile Gly Gly Gly Lys Tyr Ser Met Ser Ser
115 120 125

Leu His Tyr Thr Ala Phe Asp Pro Ile Ser Tyr Leu His His Ser Asn
130 135 140

Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Asn
145 150 155 160

Lys Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro Leu
165 170 175

Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr
180 185 190

Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu Gly
195 200 205

Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln Leu
210 215 220

Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala Gly
 225 230 235 240

Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile Ile
 245 250 255

Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu Gly
 260 265 270

Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr Glu
 275 280 285

Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Gly Phe
 290 295 300

Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser Ser
 305 310 315 320

Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
 325 330

<210> 204

<211> 415

<212> PRT

<213> Haliotis tuberculata

<400> 204

Ile Asp His Gln Asp Pro His Gln Asp Thr Ile Ile Arg Lys Asn Val
 1 5 10 15

Asp Asn Leu Thr Pro Glu Glu Ile Asn Ser Leu Arg Arg Ala Met Ala
 20 25 30

Asp Leu Gln Ser Asp Lys Thr Ala Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45

Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Asp Ala Glu Lys Lys
 50 55 60

Phe Ser Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Cys Leu
 85 90 95

Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser His Leu Pro
 100 105 110

Asp Leu Val Ser Gln Gln Asn Tyr Thr Asp Ala Ile Ser Thr Val Glu
 115 120 125

Ala Arg Asn Pro Trp Tyr Ser Gly His Ile Asp Thr Val Gly Val Asp
 130 135 140

Thr Thr Arg Ser Val Arg Gln Glu Leu Tyr Glu Ala Pro Gly Phe Gly
 145 150 155 160

His Tyr Thr Gly Val Ala Lys Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175

Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Ser Glu Pro Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Thr Tyr Asp Pro Ile Phe Tyr Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Ser Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Thr Asp Glu Ile Asn Pro Asp Asp Glu Thr Arg Gln
 260 265 270
 His Ala Val Pro Phe Ser Val Phe Asp Tyr Lys Asn Asn Phe Asn Tyr
 275 280 285
 Glu Tyr Asp Thr Leu Asp Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Ser Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu His Gly Ile Gln Gln Ser Ala Leu Val Lys Phe Phe Val Cys
 325 330 335
 Lys Ser Asp Asp Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile Leu
 340 345 350
 Gly Asp Glu Ala Glu Met Pro Trp Gly Tyr Asp Arg Leu Tyr Lys Tyr
 355 360 365
 Glu Ile Thr Glu Gln Leu Asn Ala Leu Asp Leu His Ile Gly Asp Arg
 370 375 380
 Phe Phe Ile Arg Tyr Glu Ala Phe Asp Leu His Gly Thr Ser Leu Gly
 385 390 395 400
 Ser Asn Ile Phe Pro Lys Pro Ser Val Ile His Asp Glu Gly Ala
 405 410 415

<210> 205

<211> 415

<212> PRT

<213> *Haliotis tuberculata*

<400> 205

Gly His His Gln Ala Asp Glu Tyr Asp Glu Val Val Thr Ala Ala Ser
 1 5 10 15

His Ile Arg Lys Asn Leu Lys Asp Leu Ser Lys Gly Glu Val Glu Ser
 20 25 30

Leu Arg Ser Ala Phe Leu Gln Leu Gln Asn Asp Gly Val Tyr Glu Asn
 35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Asp Asp Asn Gly Arg
 50 55 60
 Lys Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ser Val Pro Tyr Trp Asp Trp Thr Glu Thr Phe Thr Glu Leu
 100 105 110
 Pro Ser Leu Ile Ala Glu Ala Thr Tyr Phe Asn Ser Arg Gln Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly Lys Ile Ser Phe Glu Asn Ala
 130 135 140
 Val Thr Thr Arg Asp Pro Gln Pro Glu Leu Tyr Val Asn Arg Tyr Tyr
 145 150 155 160
 Tyr Gln Asn Val Met Leu Ala Phe Glu Gln Asp Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Met Val His Asn Val Leu His Ala Trp Leu Gly
 180 185 190
 Gly Arg Ala Thr Tyr Ser Ile Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Ile Asn Leu Met Arg Lys Pro Leu His Pro Phe Asp Asn Ser
 245 250 255
 Asp Leu Asn His Asp Pro Val Thr Phe Lys Tyr Ser Lys Pro Thr Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn Asn Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe Asn His Phe Ser Ile Pro Arg Leu Glu Glu Ile Ile Arg Ile Arg
 290 295 300
 Gln Arg Gln Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Thr Val Glu Ile Phe Val Cys Val Pro Thr Thr Ser Gly
 325 330 335
 Glu Gln Asn Cys Glu Asn Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Ala Phe His Phe Asp Arg Leu Tyr Arg Phe Asp Ile
 355 360 365

Ser Glu Thr Leu Arg Asp Leu Gly Ile Gln Leu Asp Ser His Asp Phe
 370 375 380

Asp Leu Ser Ile Lys Ile Gln Gly Val Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400

His Ile Leu Pro Glu Pro Ser Leu Ile Phe Val Pro Gly Ser Ser
 405 410 415

<210> 206

<211> 418

<212> PRT

<213> *Haliotis tuberculata*

<400> 206

Ser Phe Leu Arg Pro Asp Gly His Ser Asp Asp Ile Leu Val Arg Lys
 1 5 10 15

Glu Val Asn Ser Leu Thr Thr Arg Glu Thr Ala Ser Leu Ile His Ala
 20 25 30

Leu Lys Ser Met Gln Glu Asp His Ser Pro Asp Gly Phe Gln Ala Ile
 35 40 45

Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Thr
 50 55 60

His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln Trp
 65 70 75 80

His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ala Leu Arg Arg His Gly
 85 90 95

Ala Ala Val Gly Val Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser His
 100 105 110

Leu Pro Glu Leu Val Thr Met Glu Thr Tyr His Asp Ile Trp Ser Asn
 115 120 125

Arg Asp Phe Pro Asn Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu Gly
 130 135 140

Glu Asn Ile Thr Thr Glu Arg Glu Val Ile Ala Asp Lys Leu Phe Val
 145 150 155 160

Lys Gly Gly His Val Phe Asp Asn Trp Phe Phe Lys Gln Ala Ile Leu
 165 170 175

Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile
 180 185 190

Leu His Asn Gly Val His Thr Trp Val Gly Gly Ser Arg Thr His Ser
 195 200 205

Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Leu His
 210 215 220

His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln Glu
 225 230 235 240

Gln Arg Gly Leu Ser Gly Asp Glu Ala His Cys Ala Leu Glu Gln Met
 245 250 255
 Arg Glu Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Leu Asn
 260 265 270
 Gln Leu Thr Gln Asp Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr Arg
 275 280 285
 Lys Phe Gly Tyr Glu Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser Val
 290 295 300
 Ala Glu Leu Asp Gln Tyr Ile Ile Glu His Gln Glu Asn Asp Arg Val
 305 310 315 320
 Phe Ala Gly Phe Leu Leu Ser Gly Phe Gly Gly Ser Ala Ser Val Asn
 325 330 335
 Phe Gln Val Cys Arg Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr Phe
 340 345 350
 Thr Val Leu Gly Gly Ser Ala Glu Met Ala Trp Ala Phe Asp Arg Leu
 355 360 365
 Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Glu Lys Met His Leu Arg Tyr
 370 375 380
 Asp Asp Asp Phe Thr Ile Ser Val Ser Leu Thr Ala Asn Asn Gly Thr
 385 390 395 400
 Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln Arg
 405 410 415
 Gly His

<210> 207
 <211> 416
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 207
 Arg Asp Ile Asn Thr Lys Ser Met Ser Ala Asn Arg Val Arg Arg Glu
 1 5 10 15
 Leu Ser Asp Leu Ser Ala Arg Asp Pro Ser Ser Leu Lys Ser Ala Leu
 20 25 30
 Arg Asp Leu Gln Glu Asp Asp Gly Pro Asn Gly Tyr Gln Ala Leu Ala
 35 40 45
 Ala Phe His Gly Leu Pro Ala Gly Cys His Asp Ser Gln Gly Asn Glu
 50 55 60
 Ile Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro Gln Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Leu Glu Met Ala Leu Arg Arg His Gly Ser Ser
 85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Glu Leu Pro
 100 105 110
 Ser Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp His Asp Ala Val
 115 120 125
 Val Asn Asn Pro Phe Ser Lys Gly Phe Val Lys Phe Ala Asn Thr Tyr
 130 135 140
 Thr Val Arg Asp Pro Gln Glu Met Leu Phe Gln Leu Cys Glu His Gly
 145 150 155 160
 Glu Ser Ile Leu Tyr Glu Gln Thr Leu Leu Ala Leu Glu Gln Thr Asp
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Leu His Asn Val Ile His
 180 185 190
 Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Leu Ser Ser Leu His Tyr
 195 200 205
 Ala Ser Tyr Asp Pro Phe Phe Phe Ile His His Ser Phe Val Asp Lys
 210 215 220
 Met Trp Val Val Trp Gln Ala Leu Gln Lys Arg Arg Lys Leu Pro Tyr
 225 230 235 240
 Lys Arg Ala Asp Cys Ala Val Asn Leu Met Thr Lys Pro Met Arg Pro
 245 250 255
 Phe Asp Ser Asp Met Asn Gln Asn Pro Phe Thr Lys Met His Ala Val
 260 265 270
 Pro Asn Thr Leu Tyr Asp Tyr Glu Thr Leu Tyr Tyr Ser Tyr Asp Asn
 275 280 285
 Leu Glu Ile Gly Gly Arg Asn Leu Asp Gln Leu Gln Ala Glu Ile Asp
 290 295 300
 Arg Ser Arg Ser His Asp Arg Val Phe Ala Gly Phe Leu Leu Arg Gly
 305 310 315 320
 Ile Gly Thr Ser Ala Asp Val Arg Phe Trp Ile Cys Arg Asn Glu Asn
 325 330 335
 Asp Cys His Arg Gly Gly Ile Ile Phe Ile Leu Gly Gly Ala Lys Glu
 340 345 350
 Met Pro Trp Ser Phe Asp Arg Asn Phe Lys Phe Asp Ile Thr His Val
 355 360 365
 Leu Glu Lys Ala Gly Ile Ser Pro Glu Asp Val Phe Asp Ala Glu Glu
 370 375 380
 Pro Phe Tyr Ile Lys Val Glu Ile His Ala Val Asn Lys Thr Met Ile
 385 390 395 400
 Pro Ser Ser Val Ile Pro Ala Pro Thr Ile Ile Tyr Ser Pro Gly Glu
 405 410 415

<210> 208
 <211> 402
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 208
 Gly Arg Ala Ala Asp Ser Ala His Ser Ala Asn Ile Ala Gly Ser Gly
 1 5 10 15
 Val Arg Lys Asp Val Thr Thr Leu Thr Val Ser Glu Thr Glu Asn Leu
 20 25 30
 Arg Gln Ala Leu Gln Gly Val Ile Asp Asp Thr Gly Pro Asn Gly Tyr
 35 40 45
 Gln Ala Ile Ala Ser Phe His Gly Ser Pro Pro Met Cys Glu Met Asn
 50 55 60
 Gly Arg Lys Val Ala Cys Cys Ala His Gly Met Ala Ser Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Val Lys Gln Met Glu Asp Ala Leu Ala Asp His
 85 90 95
 Gly Ser His Ile Gly Ile Pro Tyr Trp Asp Trp Thr Thr Ala Phe Thr
 100 105 110
 Glu Leu Pro Ala Leu Val Thr Asp Ser Glu Asn Asn Pro Phe His Glu
 115 120 125
 Gly Arg Ile Asp His Leu Gly Val Thr Thr Ser Arg Ser Pro Arg Asp
 130 135 140
 Met Leu Phe Asn Asp Pro Glu Gln Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Tyr Cys Gln Phe Glu Val
 165 170 175
 Gln Phe Glu Leu Thr His Asn Ala Ile His Ser Trp Thr Gly Gly Arg
 180 185 190
 Ser Pro Tyr Gly Met Ser Thr Leu Glu Phe Thr Ala Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220
 Ala Leu Gln Lys Tyr Arg Gly Leu Pro Tyr Asn Glu Ala His Cys Glu
 225 230 235 240
 Ile Gln Val Leu Lys Gln Pro Leu Arg Pro Phe Asn Asp Asp Ile Asn
 245 250 255
 His Asn Pro Ile Thr Lys Thr Asn Ala Arg Pro Ile Asp Ser Phe Asp
 260 265 270

Tyr Glu Arg Phe Asn Tyr Gln Tyr Asp Thr Leu Ser Phe His Gly Lys
 275 280 285
 Ser Ile Pro Glu Leu Asn Asp Leu Leu Glu Glu Arg Lys Arg Glu Glu
 290 295 300
 Arg Thr Phe Ala Ala Phe Leu Leu Arg Gly Ile Gly Cys Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Arg Pro Asn Gly Asp Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Val Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Arg Val Met Asn Gln Leu His Leu
 355 360 365
 Gln Tyr Asp Ser Asp Phe Ser Phe Arg Val Lys Leu Val Ala Thr Asn
 370 375 380
 Gly Thr Glu Leu Ser Ser Asp Leu Leu Lys Ser Pro Thr Ile Glu His
 385 390 395 400
 Glu Leu

<210> 209
 <211> 512
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 209
 Gly Ala His Arg Gly Pro Val Glu Glu Thr Glu Val Thr His Gln Asn
 1 5 10 15
 Thr Asp Gly Asn Ala His Phe His Arg Lys Glu Val Asp Ser Leu Ser
 20 25 30
 Leu Asp Glu Ala Asn Asn Leu Lys Asn Ala Leu Tyr Lys Leu Gln Asn
 35 40 45
 Asp His Ser Leu Thr Gly Tyr Glu Ala Ile Ser Gly Tyr His Gly Tyr
 50 55 60
 Pro Asn Leu Cys Pro Glu Glu Gly Asp Asp Lys Tyr Pro Cys Cys Val
 65 70 75 80
 His Gly Met Ala Ile Phe Pro His Trp His Arg Leu Leu Thr Ile Gln
 85 90 95
 Leu Glu Arg Ala Leu Glu His Asn Gly Ala Leu Leu Gly Val Pro Tyr
 100 105 110
 Trp Asp Trp Thr Lys Asp Leu Ser Ser Leu Pro Ala Phe Phe Ser Asp
 115 120 125
 Ser Ser Asn Asn Asn Pro Tyr Phe Lys Tyr His Ile Ala Gly Val Gly
 130 135 140

His Asp Thr Val Arg Glu Pro Thr Ser Leu Ile Tyr Asn Gln Pro Gln
 145 150 155 160
 Ile His Gly Tyr Asp Tyr Leu Tyr Tyr Leu Ala Leu Thr Thr Leu Glu
 165 170 175
 Glu Asn Asn Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn
 180 185 190
 Ala Val His Ser Trp Leu Gly Gly Ser Gln Lys Tyr Ser Met Ser Thr
 195 200 205
 Leu Glu Tyr Ser Ala Phe Asp Pro Val Phe Met Ile Leu His Ser Gly
 210 215 220
 Leu Asp Arg Leu Trp Ile Ile Trp Gln Glu Leu Gln Lys Ile Arg Arg
 225 230 235 240
 Lys Pro Tyr Asn Phe Ala Lys Cys Ala Tyr His Met Met Glu Glu Pro
 245 250 255
 Leu Ala Pro Phe Ser Tyr Pro Ser Ile Asn Gln Asp Glu Phe Thr Arg
 260 265 270
 Ala Asn Ser Lys Pro Ser Thr Val Phe Asp Ser His Lys Phe Gly Tyr
 275 280
 His Tyr Asp Asn Leu Asn Val Arg Gly His Ser Ile Gln Glu Leu Asn
 290 295 300
 Thr Ile Ile Asn Asp Leu Arg Asn Thr Asp Arg Ile Tyr Ala Gly Phe
 305 310 315 320
 Val Leu Ser Gly Ile Gly Thr Ser Ala Ser Val Lys Ile Tyr Leu Arg
 325 330 335
 Thr Asp Asp Asn Asp Glu Glu Val Gly Thr Phe Thr Val Leu Gly Gly
 340 345 350
 Glu Arg Glu Met Pro Trp Ala Tyr Glu Arg Val Phe Lys Tyr Asp Ile
 355 360 365
 Thr Glu Val Ala Asp Arg Leu Lys Leu Ser Tyr Gly Asp Thr Phe Asn
 370 375 380
 Phe Arg Leu Glu Ile Thr Ser Tyr Asp Gly Ser Val Val Asn Lys Ser
 385 390 395 400
 Leu Pro Asn Pro Phe Ile Ile Tyr Arg Pro Ala Asn His Asp Tyr Asp
 405 410 415
 Val Leu Val Ile Pro Val Gly Arg Asn Leu His Ile Pro Pro Lys Val
 420 425 430
 Val Val Lys Arg Gly Thr Arg Ile Glu Phe His Pro Val Asp Asp Ser
 435 440 445
 Val Thr Arg Pro Val Val Asp Leu Gly Ser Tyr Thr Ala Leu Phe Asn
 450 455 460

Cys Val Val Pro Pro Phe Thr Tyr Arg Gly Phe Glu Leu Asn His Val
465 470 475 480

Tyr Ser Val Lys Pro Gly Asp Tyr Tyr Val Thr Gly Pro Thr Arg Asp
485 490 495

Leu Cys Gln Asn Ala Asp Val Arg Ile His Ile His Val Glu Asp Glu
500 505 510

<210> 210
<211> 967
<212> DNA
<213> Megathura crenulata

<400> 210
ggcctacogt actgggaactg gactgaaccc atgacacaca ttccgggtct ggcaggaaac 60
aaaacttatg tggattctca tgggtgcatcc cacacaaatc cttttcatag ttcaagtatt 120
gcatttgaag aaaattgtcc ccacacaaa agacaaatag atcaaaagact ctttaaacc 180
gctacctttg gacaccacac agacctgttc aaccagattt tgtatgcctt tgaacaagaa 240
gattactgtg actttgaagt ccaatttgag attaccata acacgattca cgcttggaca 300
ggaggaagcg aacatttctc aatgtcgctc ctacattaca cagctttcga tctttgttt 360
tactttcacc attctaactg tgaatcgctt tgggcggtt ggcaagcctt acagatgaga 420
cggcataaac cctacagggc ccactgcgcc atatctctgg aacatatgca tctgaaacca 480
ttcgctcttt catctccctc taacaataac gaaaagactc atgccaatgc catgccaacc 540
aagatctacg actatgaaaa tgtctctcat tacacatacg aagatttaac atttggaggc 600
atctctctgg aaaacataga aaagatgac cagcaaaacc agcaagaaga cagaatatat 660
gcgggttttc tctgtgctgg catcagctac tcagcaaatg ttgatatctt cattaaaact 720
acagatctcg tgcaacataa ggctggaaca tttgcagtcg tcgggtggaag caaggaaatg 780
aagtggggat ttgatcgctg tttaagttt gacatcacgc acgttttgaa agatctcgat 840
ctcactgctg atggcgattt cgaagttaac gttgacatca ctgaagtcca tggaactaaa 900
cttgcatcca gtcttatccc acatgcttct gtcattcggt agcatgcacg tggtaagctg 960
aatagag 967

<210> 211
<211> 1242
<212> DNA
<213> Megathura crenulata

<400> 211
ttaaatttga caaagtgcga aggagtcgtc ttattcgaaa aaatgtagac cgttttagacc 60
ccgaggagat gaattgaactt cgtaaagccc tagccttact gaaagaggac aaaagtgcgc 120
gtggatttca gcagcttggt gcatctcatg gggagccaaa atggtgtcct agtcccgaag 180
catctaaaaa atttgctcgc tgtgttcacg gcatgtctgt gttccctcac tggcatcgac 240
tgttgacggt tcagagtga aatgctttga gacgacatgg ctacgatgga gctttgcgct 300
actggattgt gactctctct cttaatcacc ttcccgaact ggcagatcat gagaagtaac 360
tcgaccctga agatggggta gagaagcata acccttggtt cgatgggtcat atagatcacg 420
tcgacaaaac aacacacaaga agtggtcaga ataaactctt cgaacagcct gagtttggtc 480
attatataca cattgccaaa caagtactgc tagcgtttgga acaggacaat tctcttgact 540
ttgaaatcca atattgagatt gccataact acatccatgc acttgtagga ggcgctcagc 600
cttatgggat ggcacgcctt cgtacacact cttttagtcc actattctac ttgcatcact 660
ctaatacaga tegtatatgg gcaatatggc aggtcttaca gaagtacaga ggaaaacctg 720
acaacgttgc taactgtgct gttacatcga ttgagaaccc ttgcaacca tttggcctct 780
ctgccaatat caacacagac catgtaacca aggagcattc agtgcacat aacgtttttg 840
attacaagac caatttcaat tatgaatatg acactttgga atttaacggt ctctcaactc 900
ctcagttgaa taaaagctc gaagcgataa agagccaaga caggtttcttt gcaggtctcc 960
tgttatctgg tttaagaaa tcatctcttg ttaaatcaa tatttgacc gatagcagca 1020
actgtcacc cgctggagag ttttaccttc tgggtgatga aaacgagatg catggggcat 1080

acgatagagt	cttcaaatat	gacataaccg	aaaaactcca	cgatctaaag	ctgcatgcag	1140
aagaccactt	ctacattgac	tatgaagtat	ttgaccttaa	accaggaagc	ctgggaaaaa	1200
atttgttcaa	gcagccttca	gtcatttcag	aaccaagaat	ag		1242

<210> 212

<211> 1236

<212> DNA

<213> Megathura crenulata

<400> 212

gtcaccatga	aggcgaaagta	tatcaagctg	aagtaacttc	tgccaaccgt	attccgaaaa	60
acattgaaaa	tctgagcctt	ggtgaactcg	aaagtctgag	agctgccttc	ctggaaattg	120
aaaacgatgg	aacttcagaa	tcaatagcta	aattccatgg	tagccctggg	ttgtgccagt	180
taaatggtaa	ccccatctct	tggtgtgtcc	atggcatgcc	aacttcccc	cactgggaca	240
gactgtacgt	gggtgtcggt	gagaatgcc	tcttgaaaaa	aggatcatct	gtagctgttc	300
cctattggga	ctggacaaaa	cgaatcgaac	atttacctca	cctgatttca	gacgccactt	360
actacaattc	caggcaacat	cactatgaga	caaacccatt	ccatcatggc	aaaatcacac	420
acgagaatga	aatcactact	agggatccca	aggacagcct	cttccattca	gactactttt	480
acgagcaggt	cctttacgcc	ttggagcagg	ataacttctg	tgatttcgag	attcagttgg	540
agatatcata	caatgcattg	cattctttac	ttggtggcaa	aggtaaatat	tccatgtcaa	600
accttgatta	cgctgtcttt	gatctgtgt	tcttctctca	tcacgcaacg	actgacagaa	660
tctgggcaat	ctggcaagac	cttcagaggt	tccgaaaaacg	gccataccga	gaagcgattt	720
gcgctatcca	attgatgcac	acgccactcc	agccgtttga	taagagcgac	aacaatgacg	780
aggcaacgaa	aacgcattgc	actccacatg	atggttttga	atatcaaaac	agctttgggt	840
atgcttacga	taattctgaa	ctgaatcact	actcgattcc	tcagcttgat	catatgctgc	900
aagaaagaaa	aaggcatgac	agagttatgc	ctggcttctt	ccttcacaat	attggaacat	960
ctgcgcatgg	ccatgtattt	gtatgtctcc	caactgggga	acacacgaag	gactcgactt	1020
atgaggctgg	tatgtctctc	actttaggcg	gtcaaacgga	gatgtccttt	gtatttgaca	1080
gtctttacaa	actgtacata	actaaagcct	tgaaaaagaa	cggtgtggcc	ctgcaagagc	1140
atttctgatt	ggaaattgag	attacggcgt	tgaatggatc	tcattctagac	agtcattgtca	1200
tccactctcc	cactatactg	tttgaggcgg	gaacag			1236

<210> 213

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 213

attctgccta	cacagatgat	ggacacactg	aaccagtgat	gattcgcmaa	gatattcacac	60
aatctggaca	gcgtcaacaa	ctgtcactgg	tgaaggccct	cgagtccatg	aaagccgacc	120
attcattctga	tgggttccag	gcaatcgctt	ccttccatgc	tcttctctct	ctttgtccat	180
caccagctgc	tccaagaagg	tttgctgtct	gcgtccatgc	catggcaacg	ttcccacaat	240
ggcaccgctc	gtcacagctc	caattccaag	attctctcag	aaaacatggg	cgagctgttg	300
gactctcgta	ctgggactgg	accctacctc	gttctgaatt	accagagctc	tgaccctgtc	360
caactattca	tggaccggag	acaggcgag	atataccaaa	tccatttatt	ggttctaaaa	420
tagagttaga	agggaataaa	gtacatacta	aaagagatat	caatagggat	cgctctcttc	480
agggatcaac	aaaaacacat	cataactggt	ttattgagca	agcactgctt	gctcttgaa	540
aaacacatca	ctgcgacttc	gaggttcagt	ttgaatttat	gcataatggt	gttcataact	600
gggttgagg	caaaggagcc	tatggaattg	gccatctgca	ttatgctctc	tatgatccac	660
ttttctacat	cccatcctcc	caaaactgatc	gtattttggc	tatatggcaa	tcggttgagc	720
gtttcagagg	actttctgga	tctgaggcta	actgtgctgt	aaatctcatg	aaaactctct	780
tgaagccttt	cagctttgga	gcaccatata	atcttaatga	tcacacgcac	gatttctcaa	840
agcctgaaga	tacattogac	taccaaaagt	ttggatacat	atatgacact	ctgggaattg	900
cagggtggctc	aattcgtggc	attgaccata	tgctccgtaa	caggcaggaa	cattcagggtc	960
tctttccggg	attctctgct	gaaggatttg	gcacctctgc	cactgtcgat	ttccagggtc	1020
gtcgcacagc	gggagactgt	gaagatgcag	ggtaactcac	cgtgttgagg	ggtgaaaaag	1080
aaatgccttg	ggcctttgat	cggctttaca	agtagcacat	aacagaaaac	ttagacaaga	1140
tgaacctctg	acatgacgaa	acttccgaca	tgaagttaac	cattacatcc	tacgatggaa	1200
ctgtactcga	tagtggcctt	attccacac	cgtaactcat	ctatgatctc	gctcctc	1257

<210> 214
 <211> 191
 <212> DNA
 <213> *Megathura crenulata*

 <400> 214
 atgatattag ttgcgaccac ctgtcgtctca acaagggttcg tcatgatctg agtacactga 60
 gtgagcgaga tattggaagc cttaaatatg ctttgagcag cttgcaggca gatacctcag 120
 cagatgggttt tgcgtgccatt gcaccccttc atgggtctgc tgccaaatgt aatgacagcc 180
 acaataaaga g 191

 <210> 215
 <211> 1063
 <212> DNA
 <213> *Megathura crenulata*

 <400> 215
 gtggcatgct gtatccatgg aatgcctaca ttcccccaact ggcacagact ctacaccctc 60
 caatttgagc aagctctaag aagacatggc tctagtgtag cagtacccta ctgggactgg 120
 acaaagccaa tacataatat tccacatctg ttccacagaca aagaatacta cgatgtctgg 180
 agaataaag taatgccaaa tccatttgcc cgagggtatg tccctcaca cgatacatc 240
 acggtaaagag acgtccaaga agcctgttc cactcgacat caacgggtga cactcagcg 300
 ctctgaatc aagctctttt ggcgctggaa cagcagcact actgcgatt tgcatgccag 360
 ttggaagtc tgcacaacac aatccattac ctagtgggag gacctcaagt ctattctttg 420
 tcatcccttc attatgcttc atatgatccg atctcttcca tacaccactc cttttagtag 480
 aagggtttggg ctgctctgga ggctcttcaa gaaaagagag gcccttcact agaccgtgct 540
 gactgcgctg ttagctctgat gactcagaac atgaggcctt gccattacga acttaacct 600
 aaccagtcca ccaagaaca tgcagtcca aatgatgttt tcaagtacga actcctgggt 660
 tacagatcga acaatctgga aatcggtggc atgaatttgc atgaaattga aaaggaatc 720
 aaagacaac agcaccatgt gagagtgttt gcagggttcc tcttccacgg aattagaacc 780
 tcagctgatg tccaattcca gatttgtaaa acatcagaag attgtcacca ttgaggccaa 840
 atctctgctc ttggggggac taaagagatg gcctgggctt ataaccgttt attcaagtac 900
 gatattacc atgctcttca tgacgcacac atcactccag aagacgtatt ccatccctct 960
 gaaccattct tcatcaaggt gtcagtgaac gccgtcaac gaacagttct tccggtctca 1020
 atcctgcatg caccaacct tctctatgaa cctgtctctg gtg 1063

 <210> 216
 <211> 219
 <212> DNA
 <213> *Megathura crenulata*

 <400> 216
 accatcacga agatcatcat tcttcttcta tggctggaca tgggtgcaga aaggaaatca 60
 acacacttac cactgcagag gtggacaatc tcaaatgatgc catgagagcc gtcattggcag 120
 accacgttcc aaatggatac caggctatag cagcgttcca tggaaaccca ccaatgtgcc 180
 ctatgccaga tggaaagaat tactcgtgtt gtacacatg 219

 <210> 217
 <211> 164
 <212> DNA
 <213> *Megathura crenulata*

 <400> 217
 gcatggctac ttccccccac tggcacagac tgtacacaaa acagatggaa gatgccttga 60
 ccgcccattg tgccagagtc ggcccttccct actgggacgg gacaactgcc ttacacgctt 120
 tgccaaacttt tgtcacagat gaagaggaca atccttccca tcat 164

 <210> 218
 <211> 126
 <212> DNA
 <213> *Megathura crenulata*

<400> 218
 ggtcacatag actatttggg agtggatata actcgggtcgc cccgagacaa gttgttcaat 60
 gatccagagc gaggatcaga atcgtttcttc tacaggcagg ttctcttggc tttggagcag 120
 acagat 126

<210> 219
 <211> 322
 <212> PRT
 <213> Megathura crenulata

<400> 219
 Gly Leu Pro Tyr Trp Asp Trp Thr Glu Pro Met Thr His Ile Pro Gly
 1 5 10 15
 Leu Ala Gly Asn Lys Thr Tyr Val Asp Ser His Gly Ala Ser His Thr
 20 25 30
 Asn Pro Phe His Ser Ser Val Ile Ala Phe Glu Glu Asn Ala Pro His
 35 40 45
 Thr Lys Arg Gln Ile Asp Gln Arg Leu Phe Lys Pro Ala Thr Phe Gly
 50 55 60
 His His Thr Asp Leu Phe Asn Gln Ile Leu Tyr Ala Phe Glu Gln Glu
 65 70 75 80
 Asp Tyr Cys Asp Phe Glu Val Gln Phe Glu Ile Thr His Asn Thr Ile
 85 90 95
 His Ala Trp Thr Gly Gly Ser Glu His Phe Ser Met Ser Ser Leu His
 100 105 110
 Tyr Thr Ala Phe Asp Pro Leu Phe Tyr Phe His His Ser Asn Val Asp
 115 120 125
 Arg Leu Trp Ala Val Trp Gln Ala Leu Gln Met Arg Arg His Lys Pro
 130 135 140
 Tyr Arg Ala His Cys Ala Ile Ser Leu Glu His Met His Leu Lys Pro
 145 150 155 160
 Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr His Ala Asn
 165 170 175
 Ala Met Pro Asn Lys Ile Tyr Asp Tyr Glu Asn Val Leu His Tyr Thr
 180 185 190
 Tyr Glu Asp Leu Thr Phe Gly Gly Ile Ser Leu Glu Asn Ile Glu Lys
 195 200 205
 Met Ile His Glu Asn Gln Gln Glu Asp Arg Ile Tyr Ala Gly Phe Leu
 210 215 220
 Leu Ala Gly Ile Arg Thr Ser Ala Asn Val Asp Ile Phe Ile Lys Thr
 225 230 235 240
 Thr Asp Ser Val Gln His Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 245 250 255

Ser Lys Glu Met Lys Trp Gly Phe Asp Arg Val Phe Lys Phe Asp Ile
 260 265 270
 Thr His Val Leu Lys Asp Leu Asp Leu Thr Ala Asp Gly Asp Phe Glu
 275 280 285
 Val Thr Val Asp Ile Thr Glu Val Asp Gly Thr Lys Leu Ala Ser Ser
 290 295 300
 Leu Ile Pro His Ala Ser Val Ile Arg Glu His Ala Arg Gly Lys Leu
 305 310 315 320
 Asn Arg

<210> 220
 <211> 414
 <212> PRT
 <213> Megathura crenulata

<400> 220
 Val Lys Phe Asp Lys Val Pro Arg Ser Arg Leu Ile Arg Lys Asn Val
 1 5 10 15
 Asp Arg Leu Ser Pro Glu Glu Met Asn Glu Leu Arg Lys Ala Leu Ala
 20 25 30
 Leu Leu Lys Glu Asp Lys Ser Ala Gly Gly Phe Gln Gln Leu Gly Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Ser Lys Lys
 50 55 60
 Phe Ala Cys Cys Val His Gly Met Ser Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Ser Glu Asn Ala Leu Arg Arg His Gly Tyr Asp
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Ser Pro Leu Asn His Leu Pro
 100 105 110
 Glu Leu Ala Asp His Glu Lys Tyr Val Asp Pro Glu Asp Gly Val Glu
 115 120 125
 Lys His Asn Pro Trp Phe Asp Gly His Ile Asp Thr Val Asp Lys Thr
 130 135 140
 Thr Thr Arg Ser Val Gln Asn Lys Leu Phe Glu Gln Pro Glu Phe Gly
 145 150 155 160
 His Tyr Thr Ser Ile Ala Lys Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175
 Asn Phe Cys Asp Phe Glu Ile Gln Tyr Glu Ile Ala His Asn Tyr Ile
 180 185 190
 His Ala Leu Val Gly Gly Ala Gln Pro Tyr Gly Met Ala Ser Leu Arg
 195 200 205

Tyr Thr Ala Phe Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Val Ala Asn Cys Ala Val Thr Ser Met Arg Glu Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ala Asn Ile Asn Thr Asp His Val Thr Lys Glu
 260 265 270
 His Ser Val Pro Phe Asn Val Phe Asp Tyr Lys Thr Asn Phe Asn Tyr
 275 280 285
 Glu Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asn
 290 295 300
 Lys Lys Leu Glu Ala Ile Lys Ser Gln Asp Arg Phe Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Phe Lys Lys Ser Ser Leu Val Lys Phe Asn Ile Cys
 325 330 335
 Thr Asp Ser Ser Asn Cys His Pro Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350
 Asp Glu Asn Glu Met Pro Trp Ala Tyr Asp Arg Val Phe Lys Tyr Asp
 355 360 365
 Ile Thr Glu Lys Leu His Asp Leu Lys Leu His Ala Glu Asp His Phe
 370 375 380
 Tyr Ile Asp Tyr Glu Val Phe Asp Leu Lys Pro Ala Ser Leu Gly Lys
 385 390 395 400
 Asp Leu Phe Lys Gln Pro Ser Val Ile His Glu Pro Arg Ile
 405 410

 <210> 221
 <211> 411
 <212> PRT
 <213> Megathura crenulata

 <400> 221
 Gly His His Glu Gly Glu Val Tyr Gln Ala Glu Val Thr Ser Ala Asn
 1 5 10
 Arg Ile Arg Lys Asn Ile Glu Asn Leu Ser Leu Gly Glu Leu Glu Ser
 20 25 30
 Leu Arg Ala Ala Phe Leu Glu Ile Glu Asn Asp Gly Thr Tyr Glu Ser
 35 40 45
 Ile Ala Lys Phe His Gly Ser Pro Gly Leu Cys Gln Leu Asn Gly Asn
 50 55 60
 Pro Ile Ser Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
 65 70 75 80

Arg Leu Tyr Val Val Val Val Glu Asn Ala Leu Leu Lys Lys Gly Ser
 85 90 95
 Ser Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Arg Ile Glu His Leu
 100 105 110
 Pro His Leu Ile Ser Asp Ala Thr Tyr Tyr Asn Ser Arg Gln His His
 115 120 125
 Tyr Glu Thr Asn Pro Phe His His Gly Lys Ile Thr His Glu Asn Glu
 130 135 140
 Ile Thr Thr Arg Asp Pro Lys Asp Ser Leu Phe His Ser Asp Tyr Phe
 145 150 155 160
 Tyr Glu Gln Val Leu Tyr Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
 165 170 175
 Glu Ile Gln Leu Glu Ile Leu His Asn Ala Leu His Ser Leu Leu Gly
 180 185 190
 Gly Lys Gly Lys Tyr Ser Met Ser Asn Leu Asp Tyr Ala Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Thr Thr Asp Arg Ile Trp Ala Ile
 210 215 220
 Trp Gln Asp Leu Gln Arg Phe Arg Lys Arg Pro Tyr Arg Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Gln Leu Met His Thr Pro Leu Gln Pro Phe Asp Lys Ser
 245 250 255
 Asp Asn Asn Asp Glu Ala Thr Lys Thr His Ala Thr Pro His Asp Gly
 260 265 270
 Phe Glu Tyr Gln Asn Ser Phe Gly Tyr Ala Tyr Asp Asn Leu Glu Leu
 275 280 285
 Asn His Tyr Ser Ile Pro Gln Leu Asp His Met Leu Gln Glu Arg Lys
 290 295 300
 Arg His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly Thr
 305 310 315 320
 Ser Ala Asp Gly His Val Phe Val Cys Leu Pro Thr Gly Glu His Thr
 325 330 335
 Lys Asp Cys Ser His Glu Ala Gly Met Phe Ser Ile Leu Gly Gly Gln
 340 345 350
 Thr Glu Met Ser Phe Val Phe Asp Arg Leu Tyr Lys Leu Asp Ile Thr
 355 360 365
 Lys Ala Leu Lys Lys Asn Gly Val His Leu Gln Gly Asp Phe Asp Leu
 370 375 380
 Glu Ile Glu Ile Thr Ala Val Asn Gly Ser His Leu Asp Ser His Val
 385 390 395 400

Ile His Ser Pro Thr Ile Leu Phe Glu Ala Gly
 405 410

<210> 222
 <211> 420
 <212> PRT
 <213> Megathura crenulata

<400> 222
 Thr Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile
 1 5 10 15
 Arg Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val
 20 25 30
 Lys Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln
 35 40 45
 Ala Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala
 50 55 60
 Ala Ser Lys Arg Phe Ala Cys Cys Val His Gly Met Ala Thr Phe Pro
 65 70 75 80
 Gln Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys
 85 90 95
 His Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg
 100 105 110
 Ser Glu Leu Pro Glu Leu Leu Thr Val Ser Thr Ile His Asp Pro Glu
 115 120 125
 Thr Gly Arg Asp Ile Pro Asn Pro Phe Ile Gly Ser Lys Ile Glu Phe
 130 135 140
 Glu Gly Glu Asn Val His Thr Lys Arg Asp Ile Asn Arg Asp Arg Leu
 145 150 155 160
 Phe Gln Gly Ser Thr Lys Thr His His Asn Trp Phe Ile Glu Gln Ala
 165 170 175
 Leu Leu Ala Leu Glu Gln Thr Asn Tyr Cys Asp Phe Glu Val Gln Phe
 180 185 190
 Glu Ile Met His Asn Gly Val His Thr Trp Val Gly Gly Lys Glu Pro
 195 200 205
 Tyr Gly Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Ser Leu
 225 230 235 240
 Gln Arg Phe Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Val Asn
 245 250 255
 Leu Met Lys Thr Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn
 260 265 270

Leu Asn Asp His Thr His Asp Phe Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285
 Tyr Gln Lys Phe Gly Tyr Ile Tyr Asp Thr Leu Glu Phe Ala Gly Trp
 290 295 300
 Ser Ile Arg Gly Ile Asp His Ile Val Arg Asn Arg Gln Glu His Ser
 305 310 315 320
 Arg Val Phe Ala Gly Phe Leu Leu Glu Gly Phe Gly Thr Ser Ala Thr
 325 330 335
 Val Asp Phe Gln Val Cys Arg Thr Ala Gly Asp Cys Glu Asp Ala Gly
 340 345 350
 Tyr Phe Thr Val Leu Gly Gly Glu Lys Glu Met Pro Trp Ala Phe Asp
 355 360 365
 Arg Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Asp Lys Met Asn Leu
 370 375 380
 Arg His Asp Glu Ile Phe Gln Ile Glu Val Thr Ile Thr Ser Tyr Asp
 385 390 395 400
 Gly Thr Val Leu Asp Ser Gly Leu Ile Pro Thr Pro Ser Ile Tyr
 405 410 415
 Asp Pro Ala His
 420
 <210> 223
 <211> 418
 <212> PRT
 <213> Megathura crenulata
 <400> 223
 His Asp Ile Ser Ser His His Leu Ser Leu Asn Lys Val Arg His Asp
 1 5 10 15
 Leu Ser Thr Leu Ser Glu Arg Asp Ile Gly Ser Leu Lys Tyr Ala Leu
 20 25 30
 Ser Ser Leu Gln Ala Asp Thr Ser Ala Asp Gly Phe Ala Ala Ile Ala
 35 40 45
 Ser Phe His Gly Leu Pro Ala Lys Cys Asn Asp Ser His Asn Asn Glu
 50 55 60
 Val Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro His Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Phe Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95
 Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile His Asn Ile Pro
 100 105 110
 His Leu Phe Thr Asp Lys Glu Tyr Tyr Asp Val Trp Arg Asn Lys Val
 115 120 125

Met Pro Asn Pro Phe Ala Arg Gly Tyr Val Pro Ser His Asp Thr Tyr
130 135 140

Thr Val Arg Asp Val Gln Glu Gly Leu Phe His Leu Thr Ser Thr Gly
145 150 155 160

Glu His Ser Ala Leu Leu Asn Gln Ala Leu Leu Ala Leu Glu Gln His
165 170 175

Asp Tyr Cys Asp Phe Ala Val Gln Phe Glu Val Met His Asn Thr Ile
180 185 190

His Tyr Leu Val Gly Gly Pro Gln Val Tyr Ser Leu Ser Ser Leu His
195 200 205

Tyr Ala Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
210 215 220

Lys Val Trp Ala Val Trp Gln Ala Leu Gln Glu Lys Arg Gly Leu Pro
225 230 235 240

Ser Asp Arg Ala Asp Cys Ala Val Ser Leu Met Thr Gln Asn Met Arg
245 250 255

Pro Phe His Tyr Glu Ile Asn His Asn Gln Phe Thr Lys Lys His Ala
260 265 270

Val Pro Asn Asp Val Phe Lys Tyr Glu Leu Leu Gly Tyr Arg Tyr Asp
275 280 285

Asn Leu Glu Ile Gly Gly Met Asn Leu His Glu Ile Glu Lys Glu Ile
290 295 300

Lys Asp Lys Gln His His Val Arg Val Phe Ala Gly Phe Leu Leu His
305 310 315 320

Gly Ile Arg Thr Ser Ala Asp Val Gln Phe Gln Ile Cys Lys Thr Ser
325 330 335

Glu Asp Cys His His Gly Gly Gln Ile Phe Val Leu Gly Gly Thr Lys
340 345 350

Glu Met Ala Trp Ala Tyr Asn Arg Leu Phe Lys Tyr Asp Ile Thr His
355 360 365

Ala Leu His Asp Ala His Ile Thr Pro Glu Asp Val Phe His Pro Ser
370 375 380

Glu Pro Phe Phe Ile Lys Val Ser Val Thr Ala Val Asn Gly Thr Val
385 390 395 400

Leu Pro Ala Ser Ile Leu His Ala Pro Thr Ile Ile Tyr Glu Pro Gly
405 410 415

Leu Gly

<210> 224
 <211> 170
 <212> PRT
 <213> Megathura crenulata

<400> 224
 Asp His His Glu Asp His His Ser Ser Met Ala Gly His Gly Val
 1 5 10 15
 Arg Lys Glu Ile Asn Thr Leu Thr Thr Ala Glu Val Asp Asn Leu Lys
 20 25 30
 Asp Ala Met Arg Ala Val Met Ala Asp His Gly Pro Asn Gly Tyr Gln
 35 40 45
 Ala Ile Ala Ala Phe His Gly Asn Pro Pro Met Cys Pro Met Pro Asp
 50 55 60
 Gly Lys Asn Tyr Ser Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Leu Thr Ala His
 85 90 95
 Gly Ala Arg Val Gly Leu Pro Tyr Trp Asp Gly Thr Thr Ala Phe Thr
 100 105 110
 Ala Leu Pro Thr Phe Val Thr Asp Glu Glu Asp Asn Pro Phe His His
 115 120 125
 Gly His Ile Asp Tyr Leu Gly Val Asp Thr Thr Arg Ser Pro Arg Asp
 130 135 140
 Lys Leu Phe Asn Asp Pro Glu Arg Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp
 165 170

<210> 225
 <211> 949
 <212> DNA
 <213> Megathura crenulata

<400> 225
 ggccctgccct actgggattg gaccatgccca atgagtcatt tgccagaact ggctacaagt 60
 gagacctacc tcgatccagt tactggggaa actaaaaaca accctttcca tcacgccccaa 120
 gtggcgcttg aaaatgggtg aacaagcagg aatcctgatg ccaaaccttt tatgaacca 180
 acctacggag accacactta cctcttcgac agcatgatct acgcatttga gcaggaagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacatgc atggggttga 300
 ggacagtga aaatattcaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tctctctctg gccatttggc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctgcgcctcg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactgaa caacaacgag aaaaacgtacc acaactctgt cccactaac 540
 gtttatgatc atgtgggagt ttgtcactat cgaatgatg accttcagtt tggcgggatg 600
 accatgtcag aacttgagga atatattcac aagcagacac aacatgatag aacctttgca 660
 ggattcttcc ttctatatat tggaacatca gcaagcgtag atatcttcat caatcgagaa 720
 ggtcatgata aatacaagt gggaagtgtt gtagtacttg gtggatccaa agaaatgaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggtat atgggttcag cattactgtt gagatcaccc atgttgatgg atctccccc 900

tctcgagatc tcattccacc tcctgctata atctttgacg tggtcagag

949

<210> 226

<211> 1248

<212> DNA

<213> Megathura crenulata

<400> 226

```
ctgatgccaa agactttggc catagcagaa aaatcaggaa agccgtgtat tctctgacag 60
tcgaagaaca aactctgttg aggcgagcta tggcagatct acaggagcag aaaacatcag 120
gggggtttcca gcagatttga gccattccacg gagaacccaaa atgggtgtcca agccccgaag 180
cggagaaaaa atttgcagtc tgtgttcatg gaatggctgt ttccctctac tggccacagat 240
tgctgcagact tcaaggagaa aatgctctga ggaacatcgg atttactggt ggattgccct 300
attgggactg gactcggcca atgagcgccc ttccacattt tgttgcgtat cctacttaca 360
atgattctgt ttccgcctc gaagaagata acccatggta tcatggtoac atagattctg 420
ttgggcctga tactacaaga gctgtgcgtg atgatcttta tcaatctcct ggttctcggtc 480
actacacaga tattgcaaaa caagtccctc tggcctttga gcaggacgat tctctgtgatt 540
ttgaggttaca atttgaattt gccataatt tcatacatgc tctggttggt ggttaacgaac 600
catacagatg gtcattcttg aggtatacta catacgatcc aatctctctc ttgcaccgct 660
ccaattacaga ccgactttgg gccattttggc aagctttgca aaaatcacgg gggaaacccat 720
acaacactgc aaactgtgcc attgcatcca tgagaaaacc acttcagcca tttggtcttg 780
atagtgtcat aaatccagat gacgaaactc gtgaacattc ggttctcttc cgagtctctg 840
actacaagaa caactctgac tatgagtagt agagcctggc atttaattgt ctgtctattg 900
cccaactgga ccgagagttg cagagaagaa agtcacatga cagagtcttt gcaggattcc 960
ttcttcatga aattggcagc tctgcactgc tgaaatttcta cgtttgcaaa cacaatgtat 1020
ctgactgtga cattatgctt ggagaattct acattttggg agatgaagtc gaagctcctt 1080
ggaggtatga ccgtgtgtac aagtacgaga taacacagca gctgcacgat ttagatctac 1140
atgttgagaa taattctctc cttaaatatg aagcctttga tctgaatggc ggaagtcttg 1200
gtggaagtat ctttctccag ccttcggtga ttttcgagcc agctcgag 1248
```

<210> 227

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 227

```
gttcacacca ggctgatgaa tatcgtgagg cagtaacaag cgctagccac ataagaaaaa 60
atatccggga cctctcagag ggagaatttg agagcatcag atctgctttc ctccaaattc 120
aaaaagaggg tatatatgaa aacattgcga agttccatgg aaaaaccgga ctttgtgaac 180
atgatggaca tctctgtgct tgttgtgttc atggcatgcc cacctttccc cactggcaca 240
gactgtacgt tcttcaggtg gagaatgcgc tcttagaacg aggggtctga gttgctgttc 300
cttactggga ctggagccag aaagctgact cctcgccatc attaatcaat gatgcaactt 360
atttcaattc acgatcccg accctttgatc ctaattcctt cttcagggga catattgcct 420
tcgagaatgc tgtgagctcc agagatcctc agccagaact atgggacaat aaggacttct 480
acgagaatgt catgctggct cttgagcaag acaactctgt tgaactttgag attcagctgt 540
agctgatata caacgccctt cattctagac ttggaggaag ggctaaatac tccctttcgt 600
ctcttgatta taccgattt gatcctgtat ttttcttcca ccatgcaaac gttgacagaa 660
tctgggcatc ctggcaggac ttgcagagat atagaaaagaa accataaact gaggctgact 720
cgcgactcaa cgagatgcgt aaacctcttc aaccatttaa taaccagaa cttacaagt 780
attccatgac gcttaaacac aaacctccac aagacagttt tgattatcaa acccgcttc 840
ggtaccaata tgataacct caatttaacc acttcagcat acaaaagcta gaccaacta 900
ttcagggtag aaaacaacac gacagagttt ttgtggctt tattcttcac aacattggga 960
catctctggt ttagatatat tatatttgcg aggagaacaa aactgcaga 1020
caaaaggcgg ttctctcaac attctggggg gagaaacaga aatgccattc cactttgacc 1080
gcttgatcna ttgtgacata acgtctgctc tgcataaact ttgtgttccc ttggacggag 1140
atggattcga catcaagtt gacgtcagag ctgtcaatgg atcgactctt gatcaacaca 1200
tctccaacga accgagctcg cttttgttcc ctggtgaacg taagaatata tattatg 1257
```

<210> 228
 <211> 1239
 <212> DNA
 <213> Megathura crenulata

<400> 228
 atgggctttc acaacataat cttgtgcgaa aagaagtaag ctctcttaca acactggaga 60
 aacatttttt gaggaaagct ctcaagaaca tgcagcagca tgattctcca gacggatatt 120
 aagctatttc tctctccac gctttgcttc ctctttgtcc aagtcacatc gctgcacata 180
 gacacgcttg ttgcctccat ggtatggcta ccttccctca gtggcacaga ctctacacag 240
 ttcagtctga agattctttg aaacgacatg gttctattgt cggacttcca tattgggatt 300
 ggctgaaacg gcagcttgca ctccctgatt tgggtgacaca ggagacatac gaggacctgt 360
 tttcacacaa aaccttccca aatccgttcc tcaaggcaaa tatagaattt gaggagagg 420
 gagtaacaac agagagggat gttgatgtcg aacacctctt tgcacaaagg aactgtggtt 480
 acaacaactg gttttgcaat caggcactat atgcactaga acaagaaaat tactgtgact 540
 ttgaaataca gttcgaattt ttgcataatg gaattctatt atgggtttgga ggatcaaga 600
 cccattcaat aggtcattct cattaacgat catcacgacc actgttctat atccaccatt 660
 cgcagacaga tgcgatttgg gctatctggc aagctctcca ggagcacaga ggtctttcag 720
 ggaaggagag acactgcgcc ctggagcaaa tgaagaagccc tctcaaacct ttacagtttg 780
 gaagtcccta taatttgaac aaacgcactc aagagttctc caagcctgaa gacacatttg 840
 attatcaccg atctcgggat gattatgatt cctctgaatt tgttggcatg tctgtttcaa 900
 gtttatacaa ctatataaaa caacaacagg aagctgatag agtcttcgca ggattccttc 960
 ttaaaggatt tggacaatca gcatccgtat cgtttgatatt ctgcagacca gaccagagtt 1020
 gccaaagagc tgcatacttc tcagttctcg gtggaagttc agaaaatgctt ggcaggtttg 1080
 acaggcttta caagtagcac attacaaaaa cgttgaaaga catgaaactg cgatagcatg 1140
 acacatttca catcaaggtt cacataaagg atatagctgg agctgagttg gacagcgatc 1200
 tgattccaac tcttctgtt ctccttgaag aaggaaagc 1239

<210> 229
 <211> 191
 <212> DNA
 <213> Megathura crenulata

<400> 229
 atgggatcaa tgtacgtcac gttggtcgta atcggattcg tatggaacta tctgaactca 60
 ccgagagaga tctcgccagc ctgaaactct caatgaggtc tctacaagct gacgatgggg 120
 tgaacggtta tcaagccatt gcatattcc acggtctccc ggcctcttgt catgatgatg 180
 agggacatga g 191

<210> 230
 <211> 1060
 <212> DNA
 <213> Megathura crenulata

<400> 230
 attgctgtt gtatccacgg aatgccagta ttccacact ggcacagcgt ttacaccttg 60
 caaatggaca tggctctgtt atctcacgga tctgctgttg ctattccata ctgggactgg 120
 accaaactca tcagcaaacg gctgatcttc ttccacagcc ctgaatatata cgatccttgg 180
 agggatcgag ttgtcaataa tccatttggc aaaggctaca ttaaatccga ggacgcttac 240
 acggttaggg atctccagga cattttgtac cacttgcagg acgaaacggg aacatcrgtt 300
 ttgttagatc aaactctttt agccttagag cagacagatt tctgtgattt tgagggtcaa 360
 tttagaggtc tccataatgc tatctactac ttggtgggtg gtgcagaagt ttatgctctt 420
 tcttctcaac actatgcttc atatgaccca gcttcttata ttcatcactc ctttcttgac 480
 aaaaattggg cagctctggca agctctgcaa aagaagagaa agcgtcccta tcataaagcg 540
 gattgtgctc ttaacatgat gaccaaacca atgcgacatt ttgcacagca ttccaatcac 600
 aatggattca caaaaatgca cgcagtcctc aacactctat ttgactttca ggaccttttc 660
 tacacgtatg acaacttaga aattgctggc atgaatgta atcagttgga agcggaaatc 720
 aacggcgcaa aaagccaaac aagagctctt gccgggttcc tctcatatgg cattggaaga 780
 tcaagctgat tcagattttg gatttgcagg acagctgacg actgccacgc attgccagtc 840
 atctttattc taggaggttc taaagagatg cactgggctc atgacagaaa ctttaaatatc 900
 gacatcaccc aagctttgaa ggctcagtc atacacctg aagatgtgtt tgactatgat 960

gctcctttct tcattaaagt ggaggtccat ggtgtaaca agactgctct cccattctca 1020
gctatcccag cacctactat aatctactca gctggtgaag 1060

<210> 231
<211> 195
<212> DNA
<213> Megathura crenulata

<400> 231
atcatattgc tggcagtgga gtcaggaaag acgtgacgtc tcttaccgca tctgagatag 60
agaacctgag gcatgctctg caaagcgtga tggatgatga tggaccaat ggattccagg 120
caattgctgc ttatcaccga agtctctcca tgtgtcacat gcctgatggt agagacgttg 180
catgttgtac tcatg 195

<210> 232
<211> 164
<212> DNA
<213> Megathura crenulata

<400> 232
gaatggcctc tttccctcac tggcacagac tgtttgtgaa acagatggag gatgcactgg 60
ctggcgatgg agctcacatt ggcataccat actgggattg gacaagtgcg tttagtcatc 120
tgctgcctct agtgactgac cagcagcaca atcccttcca ccac 164

<210> 233
<211> 826
<212> DNA
<213> Megathura crenulata

<400> 233
ggacatattg ctcacgga tgtggatata tctcgatctc cgagagacat gctgttcaat 60
gacccogaac acgggtcaga atcattcttc tatagacagg ttctcttggc tctagaacag 120
acagactctt gccaatgtga agttcagttt gaaataacac acaatgcaat ccactcttgg 180
actggaggac atactccata tggaaatgtca tctactggaat atacagcata tgatccactc 240
ttttatctcc accattccaa cactgatcgt atctgggcca tctggcaggc actccagaaa 300
tacagaggtt ttcaatacaa cgcagctcat tgcgatatcc aggttctgaa acaacctctt 360
aaaccattca gcgagtccag gaatccaaac ccagtccaca gagccaattc tagggcagtc 420
gattcatttg attatgagag actcaattat caatatgaca cacttacctt ccacggacat 480
tctatctcag aacttgatgc catgcttcaa gagagaaaga aggaagagag aacatttgca 540
gccttctctg tgcacggatt tggcgccagt gctgatgttt cgtttgatgt ctgcacacct 600
gatggtcatt gtgcctttgc tggaaacctc gcggtacttg gtggggagct tgagatgccc 660
tggtcctttg aaagattggt cgttaccgat atcacaaagg ttctcaagca gatgaatctt 720
cactatgatt ctgagttcca ctttgagttg aagattgttg gcacagatgg aacagaactg 780
ccatcgatc gatcaagag ccctaccatt gaacaccatg gaggag 826

<210> 234
<211> 316
<212> PRT
<213> Megathura crenulata

<400> 234
Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
1 5 10 15
Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
20 25 30
Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
35 40 45

Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
 50 55 60
 His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
 65 70 75 80
 Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
 85 90 95
 Ala Trp Val Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
 100 105 110
 Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
 115 120 125
 Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
 130 135 140
 Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
 145 150 155 160
 Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
 165 170 175
 Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
 180 185 190
 Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Glu Tyr
 195 200 205
 Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
 210 215 220
 Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
 225 230 235 240
 Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
 245 250 255
 Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
 260 265 270
 Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
 275 280 285
 Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
 290 295 300
 Ile Pro Pro Pro Ala Ile Ile Phe Asp Val Val Arg
 305 310 315
 <210> 235
 <211> 416
 <212> PRT
 <213> Megathura crenulata
 <400> 235
 Ala Asp Ala Lys Asp Phe Gly His Ser Arg Lys Ile Arg Lys Ala Val
 1 5 10 15

Asp Ser Leu Thr Val Glu Glu Gln Thr Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Asp Asp Lys Thr Ser Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Glu Lys Lys
 50 55 60
 Phe Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Phe Thr
 85 90 95
 Gly Gly Leu Pro Tyr Trp Asp Trp Thr Arg Pro Met Ser Ala Leu Pro
 100 105 110
 His Phe Val Ala Asp Pro Thr Tyr Asn Asp Ser Val Ser Ser Leu Glu
 115 120 125
 Glu Asp Asn Pro Trp Tyr His Gly His Ile Asp Ser Val Gly His Asp
 130 135 140
 Thr Thr Arg Ala Val Arg Asp Asp Leu Tyr Gln Ser Pro Gly Phe Gly
 145 150 155 160
 His Tyr Thr Asp Ile Ala Lys Gln Val Leu Leu Ala Phe Glu Gln Asp
 165 170 175
 Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Asn Glu Pro Tyr Ser Met Ser Ser Leu Arg
 195 200 205
 Tyr Thr Thr Tyr Asp Pro Ile Phe Phe Leu His Arg Ser Asn Thr Asp
 210 215 220
 Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Asp Ser Val Ile Asn Pro Asp Asp Glu Thr Arg Glu
 260 265 270
 His Ser Val Pro Phe Arg Val Phe Asp Tyr Lys Asn Asn Phe Asp Tyr
 275 280 285
 Glu Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp
 290 295 300
 Arg Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu His Glu Ile Gly Gln Ser Ala Leu Val Lys Phe Tyr Val Cys
 325 330 335

Lys His Asn Val Ser Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile
 340 345 350
 Leu Gly Asp Glu Ala Glu Met Pro Trp Arg Tyr Asp Arg Val Tyr Lys
 355 360 365
 Tyr Glu Ile Thr Gln Gln Leu His Asp Leu Asp Leu His Val Gly Asp
 370 375 380
 Asn Phe Phe Leu Lys Tyr Glu Ala Phe Asp Leu Asn Gly Gly Ser Leu
 385 390 395 400
 Gly Gly Ser Ile Phe Ser Gln Pro Ser Val Ile Phe Glu Pro Ala Ala
 405 410 415

<210> 236
 <211> 419
 <212> PRT
 <213> Megathura crenulata

<400> 236
 Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
 1 5 10 15
 His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
 20 25 30
 Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
 35 40 45
 Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
 50 55 60
 Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Glu Lys Ala Asp Ser Leu
 100 105 110
 Pro Ser Leu Ile Asn Asp Ala Thr Tyr Phe Asn Ser Arg Ser Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly His Ile Ala Phe Glu Asn Ala
 130 135 140
 Val Thr Ser Arg Asp Pro Gln Pro Glu Leu Trp Asp Asn Lys Asp Phe
 145 150 155 160
 Tyr Glu Asn Val Met Leu Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
 165 170 175
 Glu Ile Gln Leu Glu Leu Ile His Asn Ala Leu His Ser Arg Leu Gly
 180 185 190

Gly Arg Ala Lys Tyr Ser Leu Ser Ser Leu Asp Tyr Thr Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Val Asp Arg Ile Trp Ala Ile
 210 215 220
 Trp Gln Asp Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Val Asn Glu Met Arg Lys Pro Leu Gln Pro Phe Asn Asn Pro
 245 250 255
 Glu Leu Asn Ser Asp Ser Met Thr Leu Lys His Asn Leu Pro Gln Asp
 260 265 270
 Ser Phe Asp Tyr Gln Asn Arg Phe Arg Tyr Gln Tyr Asp Asn Leu Gln
 275 280 285
 Phe Asn His Phe Ser Ile Gln Lys Leu Asp Gln Thr Ile Gln Ala Arg
 290 295 300
 Lys Gln His Asp Arg Val Phe Ala Gly Phe Ile Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Val Val Asp Ile Tyr Ile Cys Val Glu Gln Gly Gly Glu
 325 330 335
 Gln Asn Cys Lys Thr Lys Ala Gly Ser Phe Thr Ile Leu Gly Gly Glu
 340 345 350
 Thr Glu Met Pro Phe His Phe Asp Arg Leu Tyr Lys Phe Asp Ile Thr
 355 360 365
 Ser Ala Leu His Lys Leu Gly Val Pro Leu Asp Gly His Gly Phe Asp
 370 375 380
 Ile Lys Val Asp Val Arg Ala Val Asn Gly Ser His Leu Asp Gln His
 385 390 395 400
 Ile Leu Asn Glu Pro Ser Leu Leu Phe Val Pro Gly Glu Arg Lys Asn
 405 410 415
 Ile Tyr Tyr

<210> 237
 <211> 413
 <212> PRT
 <213> Megathura crenulata

<400> 237
 Asp Gly Leu Ser Gln His Asn Leu Val Arg Lys Glu Val Ser Ser Leu
 1 5 10 15
 Thr Thr Leu Glu Lys His Phe Leu Arg Lys Ala Leu Lys Asn Met Gln
 20 25 30
 Ala Asp Asp Ser Pro Asp Gly Tyr Gln Ala Ile Ala Ser Phe His Ala
 35 40 45

Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Ala His Arg His Ala Cys
 50 55 60
 Cys Leu His Gly Met Ala Thr Phe Pro Gln Trp His Arg Leu Tyr Thr
 65 70 75 80
 Val Gln Phe Glu Asp Ser Leu Lys Arg His Gly Ser Ile Val Gly Leu
 85 90 95
 Pro Tyr Trp Asp Trp Leu Lys Pro Gln Ser Ala Leu Pro Asp Leu Val
 100 105 110
 Thr Gln Glu Thr Tyr Glu His Leu Phe Ser His Lys Thr Phe Pro Asn
 115 120 125
 Pro Phe Leu Lys Ala Asn Ile Glu Phe Glu Gly Glu Gly Val Thr Thr
 130 135 140
 Glu Arg Asp Val Asp Ala Glu His Leu Phe Ala Lys Gly Asn Leu Val
 145 150 155 160
 Tyr Asn Asn Trp Phe Cys Asn Gln Ala Leu Tyr Ala Leu Glu Gln Glu
 165 170 175
 Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile Leu His Asn Gly Ile
 180 185 190
 His Ser Trp Val Gly Gly Ser Lys Thr His Ser Ile Gly His Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile His His Ser Gln Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Glu His Arg Gly Leu Ser
 225 230 235 240
 Gly Lys Glu Ala His Cys Ala Leu Glu Gln Met Lys Asp Pro Leu Lys
 245 250 255
 Pro Phe Ser Phe Gly Ser Pro Tyr Asn Leu Asn Lys Arg Thr Gln Glu
 260 265 270
 Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr His Arg Phe Gly Tyr Glu
 275 280 285
 Tyr Asp Ser Leu Glu Phe Val Gly Met Ser Val Ser Ser Leu His Asn
 290 295 300
 Tyr Ile Lys Gln Gln Gln Glu Ala Asp Arg Val Phe Ala Gly Phe Leu
 305 310 315 320
 Leu Lys Gly Phe Gly Gln Ser Ala Ser Val Ser Phe Asp Ile Cys Arg
 325 330 335
 Pro Asp Gln Ser Cys Gln Glu Ala Gly Tyr Phe Ser Val Leu Gly Gly
 340 345 350
 Ser Ser Glu Met Pro Trp Gln Phe Asp Arg Leu Tyr Lys Tyr Asp Ile
 355 360 365

Thr Lys Thr Leu Lys Asp Met Lys Leu Arg Tyr Asp Asp Thr Phe Thr
 370 375 380

Ile Lys Val His Ile Lys Asp Ile Ala Gly Ala Glu Leu Asp Ser Asp
 385 390 395 400

Leu Ile Pro Thr Pro Ser Val Leu Leu Glu Glu Lys
 405 410

<210> 238

<211> 417

<212> PRT

<213> Megathura crenulata

<400> 238

His Gly Ile Asn Val Arg His Val Gly Arg Asn Arg Ile Arg Met Glu
 1 5 10 15

Leu Ser Glu Leu Thr Glu Arg Asp Leu Ala Ser Leu Lys Ser Ala Met
 20 25 30

Arg Ser Leu Gln Ala Asp Asp Gly Val Asn Gly Tyr Gln Ala Ile Ala
 35 40 45

Ser Phe His Gly Leu Pro Ala Ser Cys His Asp Asp Glu Gly His Glu
 50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Tyr Thr Leu Gln Met Asp Met Ala Leu Ser His Gly Ser Ala
 85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Lys Leu Pro
 100 105 110

Asp Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp Arg Asp Ala Val
 115 120 125

Val Asn Asn Pro Phe Ala Lys Gly Tyr Ile Lys Ser Glu Asp Ala Tyr
 130 135 140

Thr Val Arg Asp Pro Gln Asp Ile Leu Tyr His Leu Gln Asp Glu Thr
 145 150 155 160

Gly Thr Ser Val Leu Leu Asp Gln Thr Leu Leu Ala Leu Glu Gln Thr
 165 170 175

Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Val Val His Asn Ala Ile
 180 185 190

His Tyr Leu Val Gly Gly Arg Gln Val Tyr Ala Leu Ser Ser Gln His
 195 200 205

Tyr Ala Ser Tyr Asp Pro Ala Phe Phe Ile His His Ser Phe Val Asp
 210 215 220

Lys Ile Trp Ala Val Trp Gln Ala Leu Gln Lys Lys Arg Lys Arg Pro
 225 230 235 240

Tyr His Lys Ala Asp Cys Ala Leu Asn Met Met Thr Lys Pro Met Arg
 245 250 255
 Pro Phe Ala His Asp Phe Asn His Asn Gly Phe Thr Lys Met His Ala
 260 265 270
 Val Pro Asn Thr Leu Phe Asp Phe Gln Asp Leu Phe Tyr Thr Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ala Gly Met Asn Val Asn Gln Leu Glu Ala Glu Ile
 290 295 300
 Asn Arg Arg Lys Ser Gln Thr Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320
 Gly Ile Gly Arg Ser Ala Asp Val Arg Phe Trp Ile Cys Lys Thr Ala
 325 330 335
 Asp Asp Cys His Ala Ser Gly Met Ile Phe Ile Leu Gly Gly Ser Lys
 340 345 350
 Glu Met His Trp Ala Tyr Asp Arg Asn Phe Lys Tyr Asp Ile Thr Gln
 355 360 365
 Ala Leu Lys Ala Gln Ser Ile His Pro Glu Asp Val Phe Asp Thr Asp
 370 375 380
 Ala Pro Phe Phe Ile Lys Val Glu Val His Gly Val Asn Lys Thr Ala
 385 390 395 400
 Leu Pro Ser Ser Ala Ile Pro Ala Pro Thr Ile Ile Tyr Ser Ala Gly
 405 410 415
 Glu

<210> 239
 <211> 395
 <212> PRT
 <213> Megathura crenulata

<400> 239
 Asp His Ile Ala Gly Ser Gly Val Arg Lys Asp Val Thr Ser Leu Thr
 1 5 10 15
 Ala Ser Glu Ile Glu Asn Leu Arg His Ala Leu Gln Ser Val Met Asp
 20 25 30
 Asp Asp Gly Pro Asn Gly Phe Gln Ala Ile Ala Ala Tyr His Gly Ser
 35 40 45
 Pro Pro Met Cys His Met Pro Asp Gly Arg Asp Val Ala Cys Cys Thr
 50 55 60
 His Gly Met Ala Ser Phe Pro His Trp His Arg Leu Phe Val Lys Gln
 65 70 75 80
 Met Glu Asp Ala Leu Ala Ala His Gly Ala His Ile Gly Ile Pro Tyr
 85 90 95

Trp Asp Trp Thr Ser Ala Phe Ser His Leu Pro Ala Leu Val Thr A
 100 105 110
 His Glu His Asn Pro Phe His His Gly His Ile Ala His Arg Asn Val
 115 120 125
 Asp Thr Ser Arg Ser Pro Arg Asp Met Leu Phe Asn Asp Pro Glu His
 130 135 140
 Gly Ser Glu Ser Phe Phe Tyr Arg Gln Val Leu Leu Ala Leu Glu Gln
 145 150 155 160
 Thr Asp Phe Cys Gln Phe Glu Val Gln Phe Glu Ile Thr His Asn Ala
 165 170 175
 Ile His Ser Trp Thr Gly Gly His Thr Pro Tyr Gly Met Ser Ser Leu
 180 185 190
 Glu Tyr Thr Ala Tyr Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr
 195 200 205
 Asp Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Phe
 210 215 220
 Gln Tyr Asn Ala Ala His Cys Asp Ile Gln Val Leu Lys Gln Pro Leu
 225 230 235 240
 Lys Pro Phe Ser Glu Ser Arg Asn Pro Asn Pro Val Thr Arg Ala Asn
 245 250 255
 Ser Arg Ala Val Asp Ser Phe Asp Tyr Glu Arg Leu Asn Tyr Gln Tyr
 260 265 270
 Asp Thr Leu Thr Phe His Gly His Ser Ile Ser Glu Leu Asp Ala Met
 275 280 285
 Leu Gln Glu Arg Lys Lys Glu Glu Arg Thr Phe Ala Ala Phe Leu Leu
 290 295 300
 His Gly Phe Gly Ala Ser Ala Asp Val Ser Phe Asp Val Cys Thr Pro
 305 310 315 320
 Asp Gly His Cys Ala Phe Ala Gly Thr Phe Ala Val Leu Gly Gly Glu
 325 330 335
 Leu Glu Met Pro Trp Ser Phe Glu Arg Leu Phe Arg Tyr Asp Ile Thr
 340 345 350
 Lys Val Leu Lys Gln Met Asn Leu His Tyr Asp Ser Glu Phe His Phe
 355 360 365
 Glu Leu Lys Ile Val Gly Thr Asp Gly Thr Glu Leu Pro Ser Asp Arg
 370 375 380
 Ile Lys Ser Pro Thr Ile Glu His His Gly Gly
 385 390 395